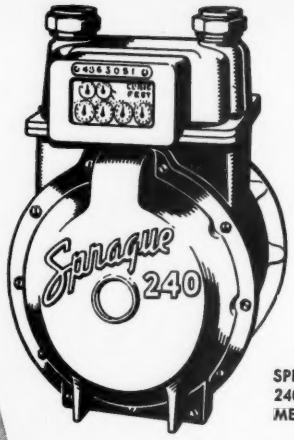
Public Utilities

FORTNIGHTLY

Volume 57 No. 3 February 2, 1956

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS



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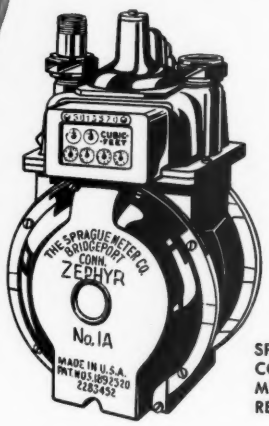

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Public Utilities FORTNIGHTLY

VOLUME 57 FEBRUARY 2, 1956 NUMBER 3

ARTICLES

FEATURE SECTIONS

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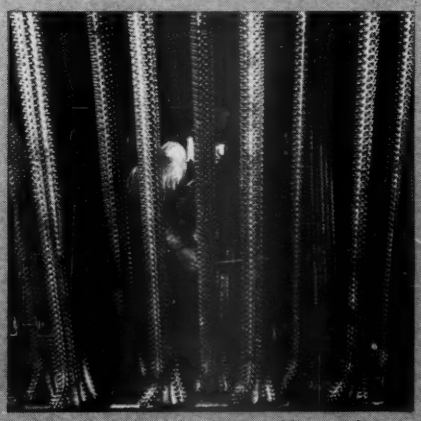
The pictures below show significant steps in the shop fabrication and assembly of B&W's Universal Pressure Steam Generator for Philo Plant.

B&W Universa

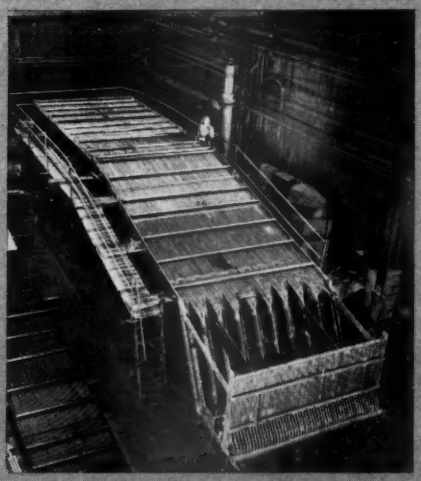
Assembly, complete and ready for shipment, of the second pass side wall is about 55 feet long, 5 feet, 6 inches wide. Alloy tubes are strength welded into the headers.

Floor tubes for secondary front wall assembly are carefully inspected for correct alignment.

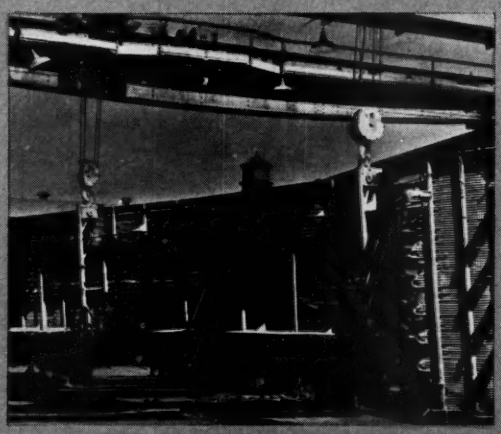


An intricate job of bending, studding, and nesting characterizes the screen and floor for the secondary front wall.

Support castings being welded on flexible, small diameter tubes for roof assembly. Note that each tube end has a steel plug in it for cleanliness and future hydrostatic tests.



Shop assembly of secondary front wall. Note assembly frame which was made of plates and pipes welded together, but was not attached physically to the tube assembly at any point.



Secondary front wall section of alloy tubes and headers on its way to be completely stress relieved after assembly.

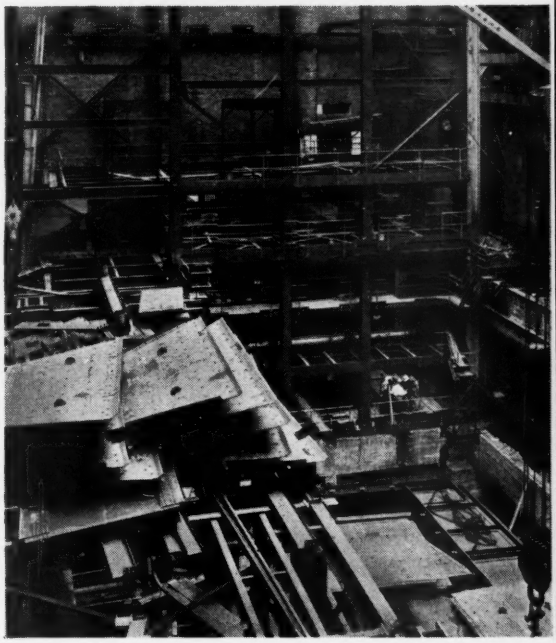
Pressure Steam Generator
erection begins at Philo Plant

inal field erection has started on the world's first ommercial supercritical pressure steam generator. t the Philo Plant of the Ohio Power Company, on he American Gas and Electric System, shop-assembled omponents of B&W's Universal Pressure Steam Gen- rator are now being erected. It will supply steam at 500 psi, 1150 F to a 125,000-kw turbine, and there ill be two stages of reheat. Expected net heat rate is 500 Btu per kilowatt hour.

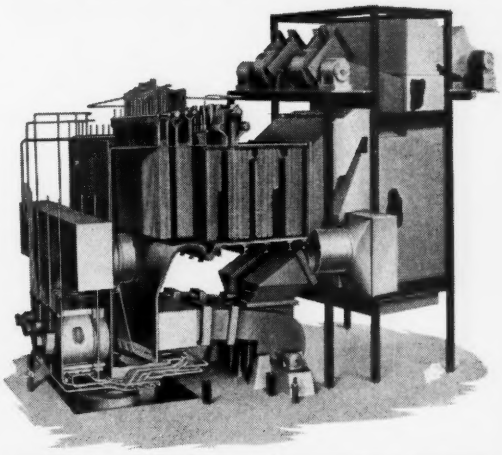
The complete installation at Philo Plant represents a ew break-through in steam electric generating effici- ncy. In the words of Phillip Sporn, President of merican Gas and Electric Service Corp.:

The Philo project reflects the outstandingly dynamic haracter of the electric power industry. Here, in the very nportant field of energy generation, new frontiers are eing pushed forward. Here, new avenues of approach o improvement in capital costs, in efficiency and in perating costs, are being opened. And, in keeping with he tradition that has characterized the growth and de- elopment of the industry, the results of this pioneering chievement will be made available to the rest of the ndustry.

The electric power industry, far from challenging any articular method of generating energy, demonstrates y this Philo project its readiness to adopt and bring orward every new development that can advance its echnical and economic well being."



Start of boiler erection at Ohio Power Company's Philo Plant.



Sectional View of B&W Universal Pressure Steam Generator.

Assembly of Cyclone Furnace pressure parts. The unit for Philo Plant will have three such Furnaces.

G-730

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Pages with the Editors

WITH the advent of natural gas in virtually every section of the United States, the problem of attracting and holding potential gas consumers in rapidly developing outlying communities has become a responsibility for the gas industry as a whole. The gas industry, as a whole, of course, includes, not only the traditional trinity of producer, pipeline, and distributor interests, but also the increasingly active advance guard—the liquefied petroleum or so-called "bottled gas" distributor.

IN many areas where new homes are going up, the installation of oil or coal furnaces and the use of substitute fuels for other household heating purposes can become an eventual barrier to the use and acceptance of gas service. Heating and other appliances represent a substantial investment to the home owners in the outlying areas. To the extent that bottled gas distribution nails down such customers, they become permanent gas customers. Or at least their homes often become permanently converted to gas service.

EVENTUALLY, gas mains may or may not reach into such outlying areas, but whether the gas customer continues as a satisfied consumer of bottled gas, or is able and willing to convert to the regular gas line service at a later date, the economic base of the gas industry as a whole is strengthened. The sale and distribution of gas appliances have the benefit of a market that would otherwise be lost, perhaps irrevocably.

E. A. COMBATALADE

C. J. MCALLISTER

THE opening article in this issue tells the story of efforts that have been made to develop a unified and more effective promotion of the sale of gas and gas-consuming appliances. One of the patterns for developing all-gas unity embraces the efforts of both competitive LP-gas distributors and regulated franchise gas-distributing utilities. This LP-gas promotion program is designed to hold the gas-oriented consumer until or after gas mains are able to branch out from urban centers or neighboring pipelines. A small conversion job puts most appliances in readiness for connection with either the LP or central main natural gas lines.

THE author of this article is the president of the Liquefied Petroleum Gas Association, Inc., C. J. MCALLISTER, who is also vice president and general manager of The Parlett Gas Company of Waldorf, Maryland. MR. MCALLISTER, whose association is the national trade association of the butane-propane gas industry, was

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ELECTRIFIED INDUSTRY and ***Today's Business***

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born in Ontario, Canada. He entered the LP-gas business at an early age more than a quarter of a century ago. He has been connected with all phases of it, including service with two of the larger companies, Phillips Petroleum Company and Suburban Propane Gas Corporation.

* * * *

DURING the current controversy in Congress over natural gas legislation, we hear repeated warnings that gas producers and gas-producing states may put an embargo on exporting gas. The theory of this is that the production industry, as well as the state, may find it more advantageous to keep the natural resource for home consumption, rather than have it depleted by pipelines running out of the state under regulatory conditions which would not make such operations sufficiently profitable or compensatory. It so happens that Maine, many years ago, actually adopted a similar policy with respect to the state's water power. The embargo law was designed to keep hydro power for home consumption. Recently, this law was repealed after many years. Why? The article beginning on page 150 gives us an interesting account of the background of this experiment and the reasons for its apparent failure.

DR. LINCOLN SMITH, author of this article on the Maine power embargo experiment, is a native of Maine and a graduate of Bowdoin College. He was educated at the University of Wisconsin (AM and PhD) and has taught at Yale, the University of Pennsylvania, and the University of California (Los Angeles). He has been more recently connected with the faculty of Columbia University.

IT is interesting to note that the now repealed Fernald Law, by which Maine sought to embargo the export of hydroelectricity, was a regressive measure. It had its concept in the nineteenth century high protective tariff and trade barrier school of economic thought. The theory was that the retention of cheap electric power would induce new industries to settle within Maine. Just how any such result could have been visualized back in 1909, when hydro development in Maine

LINCOLN SMITH

or anywhere else was in a very primitive state, is difficult to imagine in these later times.

YET, when an effort was made to repeal the law only a little more than a quarter of a century ago, it again fell under the contracting influences of the depression which started in 1929. The old trade barrier technique was once again resurrected and popularized and the fight to repeal the Fernald Law failed. It remained for a period of more general prosperity for the repeal movement to succeed finally, as analyzed in DR. SMITH'S article.

* * * *

E. A. COMBATALADE, whose article on public relations from the standpoint of a municipal utility official begins on page 161, is the director of public relations of the Sacramento Municipal Utility District, Sacramento, California. Born and raised in San Francisco, he is a graduate of the University of California and received a master's degree from Columbia University, and was initiated into Phi Delta Kappa while at Columbia. Prior to his service with the Sacramento district, he was engaged in teaching and was for several years director of training in the officer candidate school at Fort Knox, Kentucky.

THE next number of this magazine will be out February 16th.

The Editors


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(February 16, 1956, issue)

★

THE VALUE OF THE REGIONAL ANNUAL MEETING

In recent years The Southern Company, which serves the Southeast through the Alabama Power Company, Georgia Power Company, Gulf Power Company, and Mississippi Power Company, has been holding annual stockholders' meetings in the service areas of the system. The first was held in Alabama, the second in Georgia, and the 1955 meeting was held last spring in Florida. The purpose of these "area" meetings was to give an opportunity to stockholders to see some of the structures and the territory served, and to meet personally members of the management organization. Eugene A. Yates, chairman of the board of The Southern Company, in an interview with Ralph S. Child of the editorial staff of PUBLIC UTILITIES FORTNIGHTLY, has given an account of his company's experience with the three annual meetings held in various sections of the company's system area.

STATE-OWNED UTILITIES IN SWEDEN AND THEIR REGULATION

In Sweden the state government owns and operates the utility services. But there is also provision for independent regulation and control of these state-owned agencies—to assure orderly and efficient management and to make certain that the services are paying their way. H. Heimbürger, head of the financial department of the Board of Swedish Telecommunications, has written an article describing the organization of these state controls for the various utility services of Sweden. It is interesting to compare some of these practices with enterprises of public ownership of utilities in the United States where the idea of independent supervision or regulation is often rejected as unnecessary or actually interfering with a public agency.

PUBLIC ATTITUDES TOWARDS UTILITIES

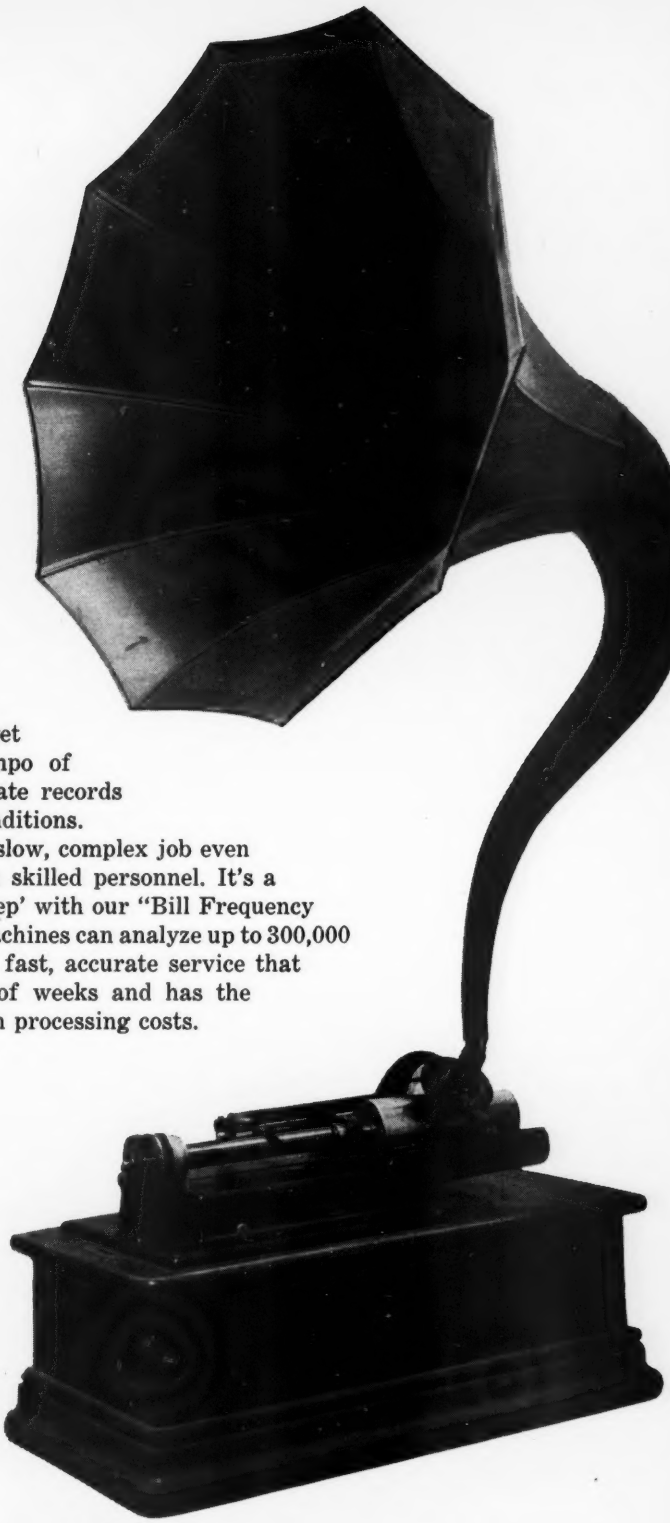
Some of the public attitudes towards utilities described in this article by Thomas C. Campbell, assistant dean of the college of commerce of West Virginia University, may not be new to readers of this publication. But the article discusses various ideas from the viewpoint of the writer outside of the utility industry, which are likely to be interesting and useful to utility people and utility regulators. Professor Campbell sees a glaring need for greater public education to offset the spread of unfair and distorted ideas about the way utilities operate and their relations with the consuming public. There is, for example, the overemphasis and publicity given to the "burden" on ratepayers when reference is made to any change or increase in utility rates. The fact that prices of other everyday living commodities, such as clothing, food, or beverages, might change or increase many times the amount of the few cents difference in the change of utility rate is accepted casually. It is always the utility rate which is the "burden"—reflecting an unhealthy public attitude on this subject.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

Wind Instrument

It only played one record at a time, which had to be changed by hand and you had to wind it after every tune. This "music by muscle" machine was the marvel of its day but now it is a museum piece.



Hand compiled figures too often are "museum pieces" by the time you get them, they just can't meet the tempo of modern business that requires accurate records in a hurry to meet fast changing conditions. Case in point . . . rate analyses. It's a slow, complex job even when a utility company uses its own skilled personnel. It's a fast, simple job performed in 'One Step' with our "Bill Frequency Analyzer", because just one of these machines can analyze up to 300,000 bills in a *single* day. Investigate this fast, accurate service that gives you analyses in days instead of weeks and has the collateral benefit of saving you 50% in processing costs. *There is no obligation for estimates.*

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General manager, Cleveland Transit System.

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FRED F. FLORENCE
President, American Bankers Association.

"A world at peace can best serve mankind, and a strong and prosperous America is the greatest assurance of the attainment of a true and lasting peace."

MARSHALL G. MUNCE
Representative, National Association of Manufacturers

"If union leadership continues to demand wage increases, which discount in advance the savings to be made by automation, reductions in prices will be impossible."

DONALD R. RICHBERG
Attorney.

"It is most important to have more people understand that what is presently sought is really a long extension and increase of unemployment insurance, because this strategy of creeping Socialism reveals that the ultimate guarantor of the annual wage must be the government of the United States."

HARRY S. TRUMAN
Former President of the United States.

"Most of the big businessmen and the rich people who have the money to buy advertising don't lean to the Democrats. Any time we get a fair break in the Republican press we're lucky. But I can understand that. You have to be rich to own a newspaper, and any man that rich is a Republican."

RAYMOND MOLEY
Columnist.

"Many members of Congress know that the country is spending more than it can wisely afford and would vote to change the course of appropriations. But they are terrorized and enslaved by a public which has accustomed itself to spending unlimited sums and which refuses to face the facts of life."

EDITORIAL STATEMENT
Los Angeles Times.

"Both this [capital gains] tax and the double tax on dividends interfere with the financing of new business—and it is only by financing of new business that employment can be given to our growing population. Economists are agreed that preferably capital for business should be 'equity' or 'risk' capital."

WILLARD F. ROCKWELL
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"Nationalization of industry already has happened in many countries where Socialism had no greater foothold thirty years ago than it has in the United States today. The harshest criticism that can be made of American businessmen is that we have devoted so much time and energy to promoting the growth of our business that we have failed to do our duty by fighting against the changes in government which are slowly but surely threatening to strangle our initiative and energy."

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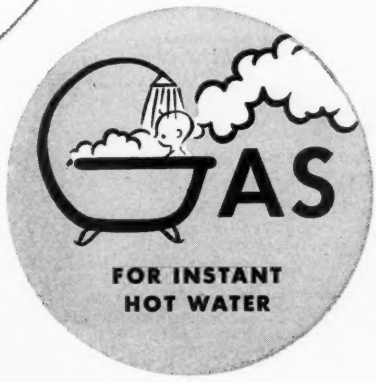

CHARLESTON GROUP: United Fuel Gas Company, Atlantic Seaboard Corporation, Amere Gas Utilities Company, Virginia Gas Distribution Corporation, Big Marsh Oil Company, Central Kentucky Natural Gas Company; **COLUMBUS GROUP:** The Ohio Fuel Gas Company; **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Binghamton Gas Works, Cumberland and Allegheny Gas Company, Home Gas Company, The Keystone Gas Company, Inc., Natural Gas Company of West Virginia; **OIL GROUP:** The Preston Oil Company.

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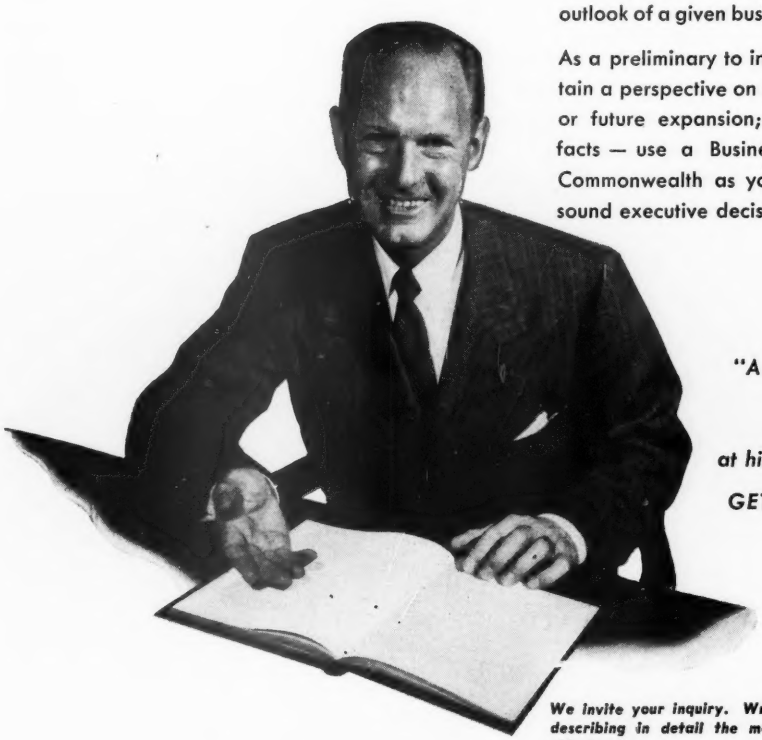

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We, who are privileged to share in the required financing, recognize the responsibility Utility managements have assumed in the vast growth of their industry.

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At this time, we wish especially to salute the Electrical segment of the industry during its National Electrical Week. Scheduled nation-wide efforts, starting on February 5th, 1956, will highlight the vitality of the whole Utility community.

UTILITIES *A·l·m·a·n·a·c·k*

FEBRUARY

Thursday—2 *Missouri Valley Electric Association begins industry and commercial sales conference, Kansas City, Mo.*	**Friday—3** *Great Lakes Power Club ends 2-day meeting, Chicago, Ill.*	**Saturday—4** *Electrical Association of Rochester will hold electrical exposition, Rochester, N. Y. Feb. 18–25.* ***Advance notice.***	**Sunday—5** *National Adequate Wiring Bureau will hold annual conference, Chicago, Ill. Feb. 23, 24.* ***Advance notice.***
Monday—6 *Industrial Electrification Council begins national conference, Cincinnati, Ohio.*	**Tuesday—7** *Edison Electric Institute, Transmission and Distribution Committee, begins meeting, Philadelphia, Pa.*	**Wednesday—8** *Louisiana Telephone Association begins annual convention, New Orleans, La.*	**Thursday—9** *Southeastern Electric Exchange, Personnel Administration Section, begins meeting, Biloxi, Miss.*
Friday—10 *Pennsylvania Electric Association, Relay Committee, ends 2-day meeting, Philadelphia, Pa.*	**Saturday—11** *Natural Gasoline Association of America will hold Permian basin regional meeting, Odessa, Tex. Feb. 24.* ***Advance notice.***	**Sunday—12** *American Management Association will hold annual electronics conference and exhibit, New York, N. Y. Feb. 27–29.* ***Advance notice.***	**Monday—13** *Minnesota Telephone Association begins annual convention, St. Paul, Minn.*
Tuesday—14 *Edison Electric Institute, Electrical Equipment Committee, begins meeting, Hot Springs, Va.*	**Wednesday—15** *Tulsa Corrosion Short Course for Pipeliners begins, Tulsa, Okla.*	**Thursday—16** *Southern Gas Association begins accounting management conference, New Orleans, La.*	**Friday—17** *New England Gas Association begins joint home service and commercial group meetings, Providence, R. I.*

Courtesy, The East Ohio Gas Company

Modern utility office building—Warren, Ohio

A concealed melting system keeps the walks and driveway free of snow.

Public Utilities
FORTNIGHTLY

VOL. 57, NO. 3 FEBRUARY 2, 1956

Bottled Gas—Advance Guard of Utility Service

The LP-gas promotion program attempts to hold the gas-oriented consumer until or after gas mains radiate from urban centers, or branch out from natural gas pipelines. There is no change in the legal status of either supplier. The fringe customer's account may shift to the regular utility supplier. Or it may be retained by the LP supplier that shows its ability to keep the gas flowing to the customer's home.

BY C. J. McALLISTER*

A WHOLE new concept of gas promotion is now being explored by the gas utilities. It could well solve their expanding service area problems and, in doing so, develop still wider gas markets for the liquefied petroleum gas dealer and the gas appliance manufacturer.

The plan is the brain child of the Liquefied Petroleum Gas Association and more particularly of its immediate past president, W. R. Sidenfaden, president of Suburban Gas Service, Inc., Upland, California.

The plan calls for creating a Joint Natural Gas and LP-Gas Council for Unity. It is hoped that when it is activated into a vital organization the council will pool the resources, man power, and market-developing potentials of 1,100 gas utili-

*Vice president, The Parlett Gas Company, Waldorf, Maryland; also, president, Liquefied Petroleum Gas Association. For additional personal note, see "Pages with the Editors."

ties, some 25,000 LP-gas operators, the Gas Appliance Manufacturers Association, pipeline companies, tank fabricators, and other related industries. Teamed together, these segments of the gas industry would offer a common product—gas—under a common emblem—the blue flame.

The joint council plan stems from a realization of the dynamic character of the gas industry and American living. As every businessman knows, our cities are pushing their boundaries farther out every year into what had been rural and small-town areas. First homes, then schools and small businesses, then industries, large and small, find their way into the suburbs. As they move they pose problems of fuel service.

The obvious mechanics of gas utility operation preclude immediate main service in these new communities. In addition, recent years' experience has added the factor of manufactured and natural gas availability.

THESE roadblocks, happily, have not dampened home owners' or businessmen's desire for gas. So thoroughly accustomed had they become to gas service in their city years that they demanded some form of gas service in their new suburban localities.

LP-gas men have been meeting that demand. They have also been creating still more interest in gas service through their own sales promotion. Today over 9,000,000 of the 38,000,000 gas customers in the United States are LP-gas users.

The pattern of urban development continues until the more closely grouped customers are added to the city utility's lines. Thus without any formal organization, in most instances, the LP-gas industry has performed the all-important mission of finding and holding customers for gas.

This "finding and holding" operation has not always been uniformly successful, as our typical outline of city development may make it seem. In all too few areas is there enough detailed co-operation between LP-gas and utility gas organizations. In some instances there is not enough awareness by both parties to the all-gas development, of the importance of selling gas and gas service. In still other areas the growth of the market has been so rapid that neither the LP-gas man nor the city gas man has felt the need for a co-ordinated promotion plan.

Co-ordination is the key to the joint council plan. Whatever the details that will be worked out later, the essential idea is a single marketing plan, fostered by both utility and nonutility gas sellers.

TODAY there are two major gas promotion organizations, each functioning in its own area, neither in a position to give much thought to the problems of the gas man outside its own sphere of influence.

The city gas industry supports the PAR plan of the American Gas Association, PAR signifying promotion, advertising, and research. The advertising and promotion portions of PAR put $2,800,000 into selling gas for home and industry. It has supporters among the manufactured, natural, mixed, and propane and butane-air utilities but unites them all under the blue flame. Its value to the city utility is beyond question, as the yearly renewals of support can testify.

The off-mains gas industry sponsors the National Council for LP-Gas Promotion and its companion, the LP-Gas Information Service, with a $400,000 annual budget. Both the council and the service unite

A New Plan for Gas Service Expansion

"A WHOLE new concept of gas promotion is now being explored by the gas utilities. It could well solve their expanding service area problems and, in doing so, develop still wider gas markets for the liquefied petroleum gas dealer and the gas appliance manufacturer. The plan is the brain child of the Liquefied Petroleum Gas Association and . . . calls for creating a Joint Natural Gas and LP-Gas Council for Unity. It is hoped that when it is activated into a vital organization the council will pool the resources, man power, and market-developing potentials of 1,100 gas utilities, some 25,000 LP-gas operators, the Gas Appliance Manufacturers Association, pipeline companies, tank fabricators, and other related industries."

bottled and tank gas sellers, propane and butane gas operators, under their own blue flame.

Two organizations—two budgets—two missions. But they meet at the city limits of wherever the gas mains end.

THE value of single effort and single control has been demonstrated in too many phases of business activity to need fresh analysis here. They apparently have been appreciated in their connection with gas promotion for the American Gas Association and the Gas Appliance Manufacturers Association directors have already given the all-gas plan their tentative approval. AGA directors in December approved the appointment of a three-man committee to study the plan with an eye to detailed discussion at a later board meeting. GAMA voted its approval with a decision to have a committee meet with AGA and LPGA, and other interested association committees, for a brass-tacks dis-

cussion. LPGA went on record in favor of the plan last May when it was first publicly presented.

While it may be months before the united gas industries will produce operating plans for the joint council, there are already several local examples of effective all-gas unity. What a few utilities and a handful of LP-gas men have done in a few states may well be a guide for national promotion.

Here is a run down on the leading local all-gas promotions now in successful operation:

In the Miami (Florida) area the local utility and virtually all of the LP-gas men serving that ever-increasing locality have been sponsoring a rounded promotion program for several years. They sell one commodity—gas—through the Gas Institute of Greater Miami. The leaders of the program are both utility and nonutility gas men.

They use radio, television, newspapers, billboards, and just about every other medium of advertising and merchandising. Prospects are invited to see their utility if their home is on the mains—or the LP-gas man of their choice if they are in off-mains territory. Every gas man in Miami rates the institute a success.

In Oklahoma the seven utilities and several LP-gas men have been sponsoring a highway sign promotion for the past six months. They use a uniformly designed sign with top billing for the blue flame, brief copy, and a spot for the name of the utility or of the LP-gas firm which erected the sign.

In Wisconsin a similar on-and-off-the-mains group is readying a newspaper promotion that will sell the advantages of gas. Again, readers will be asked to see their nearest gas man. The program is built around the spreading suburbs of Milwaukee.

In Pennsylvania and New England gas men now have similar all-gas promotions.

What statewide and marketing area gas men have done has also been demonstrated in individual instances. As a matter of fact, the joint council proposal sprang from Mr. Sidenfaden's own experience in his own area—adjacent to Los Angeles. He found a willing co-operator in near-by utilities and together they have promoted gas—to their mutual profit.

He and other LP-gas men have found that the expansion of the gas mains does not mean a net loss in customers but rather a shift in direction. They have found that their efforts may be directed to still further fringe areas. They liken it to the expansion of a circle's circumference as its radius is lengthened. Furthermore, they have found that sales promotion and publicity for utility gas has a habit of ricocheting in a friendly fashion into the expanded fringe area surrounding the newly widened utility service circle. The more people hear about gas the more they are apt to want gas. The closer gas is to them the more they realize they must have gas for their own homes.

Thus the thinking LP-gas man has learned to profit by the expansion of gas mains. His next thought is how to widen still further his sales influence.

As he sees it, the LP-gas man is doing an effective gas-selling job within the limits of his budget and his influence. He does advertise in his own territory. He may also advertise in the cities to prepare his future prospects for their move to the

suburbs. But he recognizes the fact of city gas expansion and asks why should he do all this alone.

Likewise, he recognizes that—unlike a gas utility—he is a competitive businessman. The nature of his business removes him from public utility type of operation and compels him to think competitively and to promote competitively.

Thinking in that vein he could easily imagine himself behind a utility executive's desk and wondering: Why should I place so large a portion of my load-building potential in the hands of a man who has less at stake than I have?

The joint council plan will answer these questions.

IMPRESSIVE as are the revenues from off-mains gas service in a typical urban expansion area, every LP-gas man realizes that one thing is certain—the gas mains are on the way. He will sell the initial installation and provide a few years' service but the revenues of the long-term gas load will soon flow to the utility.

What is not certain is how many profitable customers the mains will find when they reach into the suburbs—as most any gas utility executive can confirm.

If the fringe area has not been won for gas virtually the day the developer stakes out his subdivision, the odds are that the utility will find few customers. If gas is not sold on the fringe market there is a double loss—to the LP-gas distributors already in that area and to the gas utility that will later move into it. If gas is in the package when the homes and businesses are erected gains are double, in the same fashion.

We could add a third gain or loss—to the gas appliance manufacturer who shares with the utility in the long-term picture.

At this point it should be emphasized that the LP-utility gas tie-in creates no legal or technical problems. The fringe customer account merely changes hands when the mains arrive. There is no shift in the competitive or public utility position of either gas supplier. A few minutes work by a competent gas fitter will convert all the customer's appliances, most of which had been built to standards that made an interchange of gases a safe, simple matter.

ALL-GAS unity, most gas men realize, is something many utilities have been practicing for years. Well over 100 utilities have already formed separate non-franchised LP-gas units to win and hold off-mains customers against the day of mains extension. The new aspect in all-gas promotion is that the utilities will be actively co-operating with dozens of private concerns in their area to put this customer-holding program on a solid foundation, on a nation-wide basis.

Both sides of the gas business have individually demonstrated their faith in industry-wide promotion through the PAR plan and the LP-Gas Council.

Under the common banner of the big blue flame gas men must unite now to sell their entire market—all 162,000,000 Americans wherever they live and do business—the advantages of their single commodity—gas.

The Repeal of Maine's Power Embargo

During the current controversy in Congress over natural gas legislation, we hear repeated warnings that gas producers and gas-producing states may put an embargo on exporting gas. It so happens that Maine, many years ago, actually adopted a similar policy with respect to the state's water power. The embargo law was designed to keep hydro power for home consumption. Recently, this law was repealed after many years.

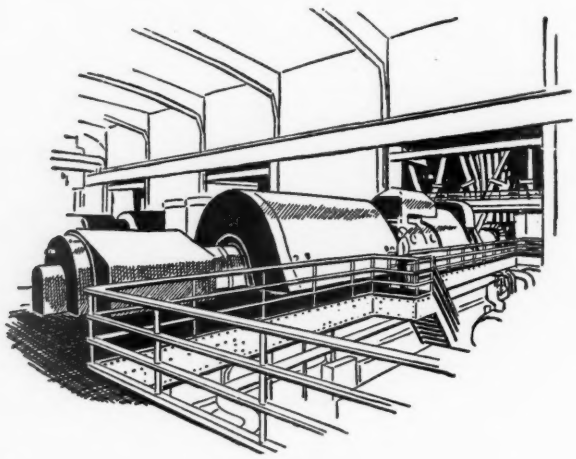
By LINCOLN SMITH*

THE state of Maine is now able to sell hydroelectricity outside its boundaries. The repeal of its notorious Fernald Law, the cardinal tenet of Maine's power policy which prohibited interstate transmission of hydroelectric power for nearly half a century, was sanctioned by its legislature at the last session. Although all the immediate and long-range results of the new policy, which became effective September, 1955, cannot be evaluated at this time, the repeal will have significant economic repercussions within the state. More important, though, will be the regional and international connotations of power flow to near-by states and into Canada. The foundation has been laid for supranational planning in the field of electric power in one sector of North America. The subject, thus, is more than local in interest.

Repeal of the Fernald Law signifies the elimination of one of the most drastic trade barriers to interstate commerce in this century.[1] Maine was the only state in

*Political economist, resident in New York, New York. For additional personal note, see "Pages with the Editors."

[1] The best study of this is F. E. Melder, *State and Local Barriers to Interstate Commerce*, Orono (1937).



the Union which completely prohibited the transmission of hydro beyond its borders. Students of politics, economics, and law were amazed how a state could "get away" with this flagrant breach of the commerce clause. Voluntary state legislative action was timely; it may have precluded impending federal invalidation of the law a few years hence. Then, too, as a case study in a facet of regionalism, repeal reveals that the economic setting for a major change in power policy had to be ripe before the political context could effectuate a new policy decision. It is a salient example of how a clearly economic and technical situation set the stage for a political decision which altered economic policy through the focus of economic planning and the use of organized intelligence.

THE purposes of this article are: (1) to account for the reversal of the state's power policy in terms of its economic and political nexus, and (2) to point up some of its economic implications in the realm of regional power development and control. The first objective is in the area of pragmatic dimensions. The second, however, involves conjecture into a galaxy of unpredictable variables. Nevertheless, the existence of certain economic and engineering possibilities and probabilities and the theoretical insight and informed judgments of leaders close to the scene point to important interstitial certitudes.

Back in 1909 the Maine legislature decreed that if any corporation sold hydroelectric power outside the state, its charter would, *ipso facto*, be revoked. Although trade fences had been well known in colonial days under the Articles of Confederation, the United States Constitution, which delegated broad interstate commerce powers to the central government, promoted a national economy. The predominating political and economic philosophy after the Civil War, with its attendant institutional impact against states' rights, likewise favored federal control of interstate trade. Thus, the Fernald Law, enacted when Maine had much undeveloped hydro potential, was a regressive measure dating back to colonial times. The naïve rationale, based on clearly chauvinistic lines, was that retention of power would induce new industries to settle within Maine in order to obtain cheap power.

DURING the depression of the 1930's, the old trade-barrier technique which Maine had resurrected was once again popularized. Many states succeeded in giving their own citizens certain economic preferences under the guise of port of entry laws, quarantine and inspection laws, public health regulations, control of corporations, and protection against fraud.[2] But after 1937 a combination of economic and political forces militated against some of the states' efforts at economic isolation. The return of prosperity and the emergence of international conflict precipitated a trend toward a national rather than a local economy. Pressure groups, governors' conferences, and other organizations induced legislatures to repeal much of the restrictive legislation. Likewise, the new personnel of the United States Supreme Court tended to support national instead of state regulation. But

[2] For an elaboration of this, see Lincoln Smith, "Can Southwestern States Limit Gas Exportation?" PUBLIC UTILITIES FORTNIGHTLY, August 17, 1950 p. 223.

Maine remained adamant with its power embargo.

In the late 1920's, when some of the power companies of Maine had a great surplus of secondary power running to waste, attempts were made to secure repeal of the law. The legislatures in 1927 and 1929 passed such measures. The governor vetoed the first, but the second went to a popular referendum. The power companies are reported to have spent in 1929, almost $200,000 in an attempt to secure repeal. But the voters' verdict on the complex and refractory measure was emphatic for the maintenance of isolationism in the production and control of the last great natural resource of the state.

THE subject then remained dormant for almost two decades. In 1947 several bills were introduced for the export of hydro. At that time they were connected inextricably with federal aid and public power, one of which purported to bring Maine into a regional power pool. According to estimates of the Federal Power Commission staff, approximately 65 per cent of New England's undeveloped hydroelectric power is in Maine.[3]

Representatives of the major power companies vigorously opposed repeal. They established a united front against a threat of public power, and the measures failed to gather momentum. Equally significant was the desire of the Maine companies to avoid regulation by the Federal Power Commission. Because of the Fernald Law, the Maine companies are among the few large utilities in the United States which do not participate in interstate commerce. Hence, they were not under the jurisdiction of the federal commission. A New England power pool would have subjected the companies to another regulatory stratum.

A monograph published in 1951 concluded that the Fernald Law was economically unsound and unconstitutional.[4] Figures were quoted from many sources to show that power alone is no longer a major factor in attracting many new industries. Fifty years ago, when transmission lines were in their infancy, power frequently was a determining ingredient in the location of industry. More recently, however, high costs for labor and transportation have relegated power to an ancillary status. Longer and more efficient transmission lines now often make it eco-

[3] "Memorandum on Information Requested by Senator Leverett Saltonstall," Federal Power Commission, February 17, 1949. Mimeo.

[4] Lincoln Smith, *The Power Policy of Maine*, Berkeley (1951).

¶ "THE *state of Maine is now able to sell hydroelectricity outside its boundaries. The repeal of its notorious Fernald Law, the cardinal tenet of Maine's power policy which prohibited interstate transmission of hydroelectric power for nearly half a century, was sanctioned by its legislature at the last session. Although all the immediate and long-range results of the new policy, which became effective September, 1955, cannot be evaluated at this time, the repeal will have significant economic repercussions within the state.*"

nomically feasible to bring the power to the industry rather than the industry to the power. Thus, the basic economic premise of the Fernald Law is no longer tenable.

THE legal argument, capsulized, was that the law constituted invalid state regulation of interstate commerce. Attention also was called to recent federal court decisions redefining navigable streams to be all inclusive. The prediction was made that the Federal Power Commission would assert jurisdiction over some intrastate power developments in Maine on the basis that the dams were located on unnavigable tributaries of navigable streams and hence subject to federal control.[5] This prediction soon came true, when the FPC required one of the corporations to take out a federal license. To date, however, the company has been put under accounting control only.

Limited transmission and sale of surplus power to other states at the discretion of the Maine Public Utilities Commission was advocated by this writer on numerous occasions. It was contended that a genuine attempt to reconcile federal, state, and local interests would give Maine more control in the long run than a purely selfish policy of total restriction which would result eventually in complete federal control. Almost twenty-five years ago one authority suggested that the court "might draw a distinction between absolute prohibition and the according of preference to local consumers."[6] The Supreme Court, very recently, in sustaining state conservation and rate regulation, said that "The only requirements consistently recognized have been that the regulation not discriminate against, or place an embargo on, interstate commerce, that it safeguard an obvious state interest, and that the local interests at stake outweigh whatever national interest there might be in the prevention of state restrictions."[7]

WE now return to the economic scene. While the Fernald Law stood still on the law books for half a century, the economics and technology behind it were dynamic. In that interval, industrial interests emerged from a supplementary to a complementary status in the economy of the state. The self-sufficiency of the agricultural communities served by local power companies was supplanted by an economic and technical interdependence which required an expanding administrative area. This did not always coincide with state lines. Later, in 1927 and 1929 the power companies developed the greater portion of their current from water power. They had large but varying amounts of secondary power running to waste. Several more highly desirable and economically feasible hydro sites remained fallow because of lack of a local market for extra power. The companies claimed there was a ready market for this power in New Hampshire and Massachusetts which could be sold at a profit.[8]

Shortly after the depression the demand curves for power within Maine jumped to undreamed proportions. The rapid extension of rural electrification

[5] *Ibid.* Also, "Maine's Power Embargo—How It May Be Terminated," *Cornell Law Quarterly,* winter 1951.

[6] Hugh L. Elsbree, *Interstate Transmission of Electric Power,* Cambridge (1931), p. 42.

[7] Cities Service Gas Co. *v.* Peerless Oil & Gas Co. (1950) 340 US 179, 186-187, 87 PUR NS 41.

[8] They insisted it would be profitable even though such sale would entail the construction of new transmission lines at a cost of at least $5,200,000.

The Responsibility for Power Exports

"THE International Joint Commission, which has jurisdiction over boundary waters between the United States and Canada, has the function of allocating the waters and the resulting power between the two countries. Feasible projects must be taken up separately and approved by both governments before initiation. It is highly significant, though, that the initiative and major responsibility for new power projects in the entire area rest with the power companies. The decision of the Maine Public Utilities Commission, for example, not to seek jurisdiction over the export of hydroelectricity, placed ultimate responsibility on the management of the corporations."

(mostly under private auspices), greater industrial demand from both large and small companies, and a more widespread use of electrical appliances in the village and on the farm required the construction of new storage reservoirs and the development of several new sites. Much of the demand was for firm and dependable power, a category for which hydroelectricity is not noted. Hence, the power companies had to construct modern and efficient steam plants. Sometimes these were used as auxiliaries to "firm up" the hydro, but at certain rather frequent times of the year the companies had to rely upon steam and oil for the major part of the current sold. Maine, which had been listed for many years as a state with great undeveloped hydroelectric resources, soon became a "have-not" hydro state. The situation gave an impetus to the campaign for the Quoddy tidal power project.

During the serious drought of 1947, power was rationed in the northern counties. In the emergency the Navy sent two destroyer escorts to Portland, whence, by relay, power was generated and fed into the north. On appeal of the governor, Canadian mills arranged a complicated system of transferring some power into Aroostook county.

THE emergency of 1947 focused attention on the obsolete character of Maine's power particularism and isolationism. The power companies of the other five New England states have had interconnections for many years, and in some sections well-integrated systems exist regardless of state lines. While the Maine companies are interconnected and co-operate with each other, the Fernald Law precluded mutual co-operation with sister companies in adjacent states and provinces.

In 1947 some power was imported from the Province of New Brunswick, and shortly thereafter Maine went into a Fernald Law "reverse" by establishing a connection with New Hampshire companies for the *importation* of electricity when needed. Maine, however, could not reciprocate in the event of emergencies sustained by its neighbors.

For almost three decades numerous state and federal leaders have argued that New England is a natural region for the production and exchange of electricity. Numerous officials, including a few from Maine, have looked askance at the power embargo law. A staff report of the Federal Power Commission and several studies and conferences of the New England Council, and especially of its committee on power, have pointed to some economies which could be effected by exchanges of power. The New England Governors' Conference has also concluded likewise. Since the usual periods of high water on many of the rivers of New England seldom occur simultaneously, five states have been able to profit, on numerous occasions, by mutual exchanges. The Maine companies, however, were required by law to be self-sufficient. So they had to keep obsolete and expensive stand-by equipment in reserve. Attempts have been made to bring Maine into a regional power compact and to participate otherwise in a regional power pool according to the natural geography and ecology of the area. In addition, some natural economies would be offered by similar arrangements between Maine and the Canadian Province of New Brunswick. These were studied on numerous occasions by the International Joint Commission between the United States and Canada, which has jurisdiction over the international waters.[9] And in recent years the hydro possibilities on the international boundary rivers have assumed an increasing degree of interest and importance.[10]

IT seems clear, then, that the 50-year-old Fernald Law was, by 1955, economically and technologically obsolete not only for Maine but also for outlying areas. Greater economies in production and savings to ratepayers depend not only upon efficient management but also upon a free flow of power over large administrative areas. Internally, even if power could help to industrialize a state once upon a time, the new economic setting, alternative sources of supply, and significant changes in the factors which determine the location of large and small industries over the years made the Fernald Law impotent in attracting industry. Yet change of a long-revered power policy in a presumably conservative and stolid state like Maine occurs when competent leaders who have the confidence of the rank and file pave

[9] Its administrative jurisdiction is well analyzed in C. J. Chacko, *The International Joint Commission between the United States of America and the Dominion of Canada*, New York (1932).

[10] For example, Portland *Press Herald*, April 15, 1954.

the way. In this case, the leaders acted judiciously and yet emphatically.

IN 1954 the voters of Maine elected Edmund S. Muskie their first Democratic governor in twenty years. Although several Republican governors previously had favored repeal, the new governor made it a major issue. In his inaugural address, he stated:

> There is no sound reason to continue this isolationist doctrine which prevents the integration of our power needs and resources with those of our natural economic partners—the neighboring New England states and Canada.[11]

He further stated that repeal would serve at least two purposes:

> 1. Integration of our power system with those of our neighbors would enable us to export surplus power in periods of good water flow and to draw on their systems when we are confronted with a deficiency. This could very well reduce the necessity for heavy investment in new installations to supplement existing facilities in the areas thus affected. As a result, the pressure for increases in rates to support such investments would be reduced.
>
> 2. The economic feasibility of developing such sites as the St. John river may well hinge on whether the power thus made available can be transported into the Canadian market. The importance of such a development to the economy of northern Maine seems obvious.

STATE Senator Lessard (Democrat) filed a bill for unconditional repeal of the Fernald Law, as part of Governor Muskie's legislative program. Another measure, introduced by Representative Bean (Republican), purported to permit power companies to export power so long as the amount of steam or diesel power they generated or bought exceeded the amount exported. Furthermore, the proposed limited transmission would require the prior approval of the public utilities commission. Although the latter bill received some rural support and a vice president of the Central Maine Power Company spoke for it, conditional repeal did not attract much attention.

Sumner T. Pike, chairman of the Maine Public Utilities Commission, and former commissioner on the Securities and Exchange Commission and commissioner on the Atomic Energy Commission, provided energetic leadership for outright repeal. In a number of speeches, he exposed many

[11] "Inaugural Address of Governor Edmund S. Muskie," January 6, 1955.

¶ "THE *fact that the enumerated and reserved powers of federalism are reversed between Canada and the United States is only ancillary. Much of the co-operation for international power will be between the private companies of Maine and the New Brunswick Electric Power Commission, which is a public power organization. There is much affinity between the two rival ideologies in this case, however. The major objective is to produce jointly more power at less cost to each.*"

of the fallacies behind the politics and economics of the Fernald Law. It was a salient example of an able and well-known public official whose intimate knowledge of the subject matter enabled him to make a positive and continuing contribution to the formulation of wise public policy. It likewise was significant for the chairman of a state regulatory agency to participate not only in the public planning process which is advisory, but also to have that advice congeal and be enacted into the new power policy of Maine. To students of public administration his appeal for outright repeal has still another significance.

MR. PIKE and his commission showed administrative self-restraint and no thirst for additional power in advocating unconditional repeal. Had the legislature delegated to the regulatory commission discretion to authorize transmission of surplus power only, the commission would have had a powerful political and economic weapon to wield. They did not seek this potentially great increment of jurisdiction for themselves.

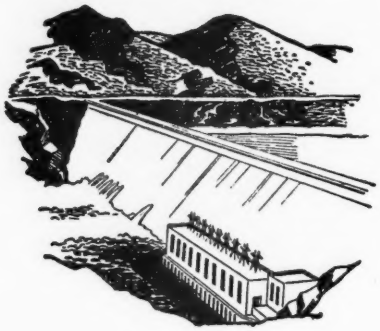
Speaking for the Maine Public Utilities Commission at the hearing before the committee on public utilities of the Maine legislature, Chairman Pike said in part:

> The principal concept on which the [Fernald] act was based was that we had a great excess of water power which would be easily available at quite low costs. That idea seemed tenable in 1909 and perhaps so until the late twenties or thirties, but our use of power in Maine has grown so rapidly that during the last ten or fifteen years all of the larger utilities have been forced to build large steam, diesel, or gas plants to fill in the periods when river flow was low, and particularly in periods of extreme drought. . . .
>
> Whatever the original idea of the law was, it seems that it is outmoded. If there was ever any real good reason for it, it seems to have disappeared. The notion that people will come running into the state to get cheap power does not seem to have worked out. As a matter of fact we no longer have cheap power. . . .
>
> Again we think the Fernald Law serves no present purpose for the state, that it is a net detriment to our economy, and should be repealed.

THE major bill came out of committee with two reports—the majority to repeal the law, and the minority for repeal with a referendum going to the people. The majority report was accepted overwhelmingly. It was pointed out that a referendum did not occur when the statute was passed in 1909, and that attaching one for repeal would simply pass the buck and enable legislators to shirk their responsibility.[12] One opponent countered that a referendum was in order because voters in 1929 by referendum expressed preference for the law.[13]

The legislative debates showed that the lawmakers grasped the principal issues involved, though nothing new was injected into the discussions. One opponent of the measure, Representative Cyr, was a member of the legislative committee which considered the embargo law when it was passed in 1909. The major views he presented, in a discursive speech which illustrated a static philosophy and suspicion to change, were that Maine's present lack of

[12] Maine *Legislative Record*, 1955, p. 1,311.
[13] *Ibid.*, p. 1,414.



Maine's Hydro Possibilities

"THE hydro potentiality of the St. John river basin, which includes territorial and boundary waters of the United States and Canada, has been studied by the International Joint Commission, but the results have not yet been made public. Unofficially, full hydro development of the river on both sides has been estimated at $225,000,000. A development of about 230,000-kilowatt capacity is possible in northern Maine at the Rankin's Rapids dam. With full storage development in Maine, Quebec, and New Brunswick, 376,400 horsepower is considered the potential between Grand Falls, New Brunswick, and Fredericton, the provincial capital."

surplus power proved that fifty years of the Fernald Law enabled Maine to hold its industries and bring in new ones. He quoted from a 1909 speech: "If we allow the electricity to go beyond the state of Maine that the state of Maine in the future would remain to be a powerhouse and a transmission line."[14] And then he asked: "What is the need of repealing the law to allow us to transport electricity outside of the state if we have not got it?"[15]

While his colleagues treated the veteran legislator with great respect, sentiment and tradition yielded to reason when the decision was made in each house. The legislative debates, however, probably did not influence many votes; all the arguments had been aired before the voting occurred.

IN 1955 the major power companies favored repeal, but disagreed on its being absolute or conditional. This split on the issue helped to preclude the emotional *pro* and *contra* corporation arguments which had beclouded the power issues in Maine for the past twenty-five years.

It now remains to consider some of the anticipated results of Maine's new power

[14] *Ibid.*, p. 1,416.
[15] *Ibid.*, p. 1,417.

policy. Shortly after the law was repealed, W. F. Wyman, president of the Central Maine Power Company, made this observation:

> With the removal of this [embargo] restriction, it will be possible for the company to make effective use of its emergency interconnection with Public Service Company of New Hampshire, which, in turn, is tied in with the New England Power Pool. While the ultimate extent of such interchange cannot be specifically evaluated at this time, it should benefit company operations both in respect to the energy interchanged and the company's reserve generating capacity requirements.[16]

Regarding interconnections, Commissioner Pike said:

> In other parts of the country, neighboring companies consult each other and instead of putting up big new plants at the same time, and each having some excess capacity, one will put one up this year, let his neighbor use from its excess for awhile, and then the other one will do the same thing, thereby sort of leapfrogging the thing, and keeping the net over-all investment down.

In Maine, though, the power self-sufficiency imposed by the Fernald Law forced the corporations to keep several old nearly obsolete plants in running condition for emergencies. Some of these will now be eliminated. He also detailed a plan for better power co-ordination on the interstate Androscoggin river. A new transmission line from Lewiston, Maine, to Berlin, New Hampshire, would feed power up north during the heavy spring flow, and enable much of the excess water to be stored in the Rangeley Lake region, to be used later in the year for the mutual benefit of consumers in both states. He estimated that the additional power might be equivalent to a new plant of 30,000-40,000-kilowatt capacity.

THE most important change, however, will be in relation to Canada. L. H. Alline, president of the Maine Public Service Company, which produces some of its power in New Brunswick, sounded the keynote here. "It seems unfair to have a fence along the border," he said. "It is not reciprocity with our neighbors."[17] Moreover, the way is at last clear for scientifically complete development and utilization of the St. John river basin. Benefits may be expected to accrue to all the Maritime provinces as well as to Maine.

The hydro potentiality of the St. John river basin, which includes territorial and boundary waters of the United States and Canada, has been studied by the International Joint Commission, but the results have not yet been made public. Unofficially, full hydro development of the river on both sides has been estimated at $225,000,000. A development of about 230,000-kilowatt capacity is possible in northern Maine at the Rankin's Rapids dam. With full storage development in Maine, Quebec, and New Brunswick, 376,400 horsepower is considered the potential between Grand Falls, New Brunswick, and Fredericton, the provincial capital.[18]

The waters of the St. John have been

[16] Letter to the stockholders of the Central Maine Power Company, Augusta, Maine, June 30, 1955.

[17] *Kennebec Journal*, Augusta, March 16, 1955. All quotations from Commissioner Pike are from a copy of his speech at the hearing the previous day.

[18] Portland *Press Herald*, April 15, 1955.

tapped with isolated projects.[19] Inasmuch as there is much flash flow in the river, considerable storage is essential to obtain maximum efficiency. This can be achieved only by full co-operation of the governments and power companies on both sides of the border. Mutual power exchanges are prerequisites for this co-operation, but in years past the Fernald Law limited this to a one-way route. At last, the legal obstacle to technically efficient power production has been eliminated.

THE International Joint Commission, which has jurisdiction over boundary waters between the United States and Canada, has the function of allocating the waters and the resulting power between the two countries. Feasible projects must be taken up separately and approved by both governments before initiation. It is highly significant, though, that the initiative and major responsibility for new power projects in the entire area rest with the power companies. The decision of the Maine Public Utilities Commission, for example, not to seek jurisdiction over the export of hydroelectricity, placed ultimate responsibility on the management of the corporations. Hence, the bulk of the planning and forecasting of power demand and supply rests with the business-managed companies.

In some respects the international aspects of power production are still complicated. The IJC does not communicate with the states and provinces; its reports go directly to the State Department of the United States and to Canada's Department of External Affairs. They, in turn, relay the reports to the subordinate governments. Nevertheless, over the years the composition of the IJC has enabled it to function with a minimum of red tape.

Then there are other cumbersome but not insurmountable difficulties for the production of Maine-New Brunswick power. The fact that the enumerated and reserved powers of federalism are reversed between Canada and the United States is only ancillary.

Much of the co-operation for international power will be between the private companies of Maine and the New Brunswick Electric Power Commission, which is a public power organization. There is much affinity between the two rival ideologies in this case, however. The major objective is to produce jointly more power at less cost to each. The markets and territories served by each are mutually exclusive. Because they are under different political jurisdictions in the matters of taxes, regulation, and control, they are not competitors in the usual public-private power controversy.

IN the final analysis, repeal of Maine's Fernald Law provides a legal release from an artificial trade barrier between states and neighboring provinces. This release invites the power companies to act according to freedom of contract to provide, unhampered, new sources of supply for the constantly increasing demand of customers in northern New England and the Maritime provinces.

[19] A $40,000,000 hydroelectric plant was started this year. The 135,000-horsepower Beachwood project is feasible without storage facilities farther upriver. See, Annual Report of the New Brunswick Electric Power Commission, 1955.

Public Relations Start at Home

There have been published a number of articles about public relations programs from the standpoint of business-managed public utilities. By way of variety, here is an article on the same subject from an official of one of our leading and more successful municipally owned public utilities.

By E. A. COMBATALADE*

Most of us are familiar with the old fable about a group of blind people who went to "see" an elephant. We can recall how one blind person felt the elephant's trunk; another, the tusks; another, the elephant's tail; and another, the ears. Thus, they all "saw" an elephant but certainly with radically different perspectives.

So it is with public relations. The individual's interpretation of the term is based on his personal experience and capabilities. What a diversified discussion would take place if each of us could present his own concept of public relations.

All would agree, however, that during the past several years, business has become increasingly aware of the importance of good public relations. Staff specialists have been employed; books have been written; courses have been added to college curriculums; societies have been formed; and experts in the field have attained professional status.

Public Relations Defined

What is public relations? To me it has three aspects: a definition, the essentials of a program, and, most important, it starts, like charity, at home. That is to say, it starts with us, as individuals.

Webster defines public relations as:

> The activities of an industry, union, corporation, profession, government, or other organization in building and maintaining sound and productive relations with special publics such as customers, employees, or stockholders, and with the public at large, so as to adapt itself to its environment and interpret itself to society.

With all due respect to Mr. Webster,

*Director of public relations, Sacramento Municipal Utility District, Sacramento, California. For additional personal note, see "Pages with the Editors."

this is highly abstract and has no particular workaday practicality for most of us. Moreover, the lexicographers utilize in this definition the very words they are defining.

The Civil Aeronautics Administration, a large governmental agency, explains public relations as:

> You are the CAA. The public judges our organization by the individual with whom it has contact. Therefore, whatever you do and however you act represents to the public the attitude of our organization.

This is, obviously, a more practicable interpretation than that quoted from Webster.

The Union Electric system of Missouri, a private utility serving more than 2,000,000 people in and about St. Louis, tells its employees this:

> There are no words, no devices with which to convince people that we are a good organization to do business with, if they do not find this out through their own personal experience.

It will be noted that there is one thing common to each of the above; *i.e.*, public relations has to do with people and particularly the interrelationships of people. Here is what we, at the Sacramento Municipal Utility District, believe:

> The public relations of an organization is the composite of all the actions of all the members on all the community all of the time.

This, we feel, is a thoroughly comprehensive and an easily comprehensible definition. Certainly an organization is precisely what all of its members contribute in service at all times to all of the people with whom they come in contact.

Let us think for a moment of some firm that we have patronized and especially why we liked or disliked that firm. I am sure that nearly all of us would say that it was the way we were treated by the members of the firm that gave us the impression we now have. After all, if it doesn't happen to *you*, as far as *you're* concerned it hasn't happened! Although it is not right or objective to judge an entire organization by what one or a few members may do or say, the fact is that is just what people do. As a matter of fact, people do not have the time for any extensive sampling of courtesy, efficiency, or considerateness. First impressions are often final impressions. Indeed, the adverse or favorable opinion of an entire nation may be formed by a person's reaction to the one national of that country with whom he may have come in contact.

To get an accurate concept of public relations, it is imperative that we realize that although we are paid for what we do from 8 A.M. to 5 P.M., what we do from 5 P.M. to 8 A.M. is often more important. How often has each of us had the experience of being asked at a social gathering about our organization, to find at a later date that we have been quoted by the questioner with a remark something like this: "Joe Doaks himself told me, and I guess he ought to know—he works for the outfit."

Sometime ago the General Motors Corporation released a brochure to all of its employees as well as its customers. In this brochure was a verse written by Edgar A. Guest. It is found in his book, *Today and Tomorrow,* published in 1942 by Reilly &

Lee Company, Chicago, Illinois. I mention it as an excellent interpretation of good public relations.

A Public Relations Program—Its Three Components

Now let us go on to the second phase of the discussion—a public relations program. Every business, be it comprised of one man or thousands, has a program—whether they know it or not—for we are social beings. Yet we seldom realize the tremendous significance of public relations and just continue to take them for granted. Taking them for granted may have the same unpleasant result that taking people for granted does—loss of their good will and co-operation. Hence an active public relations program is the very lifeblood of every organization.

The program has three major parts. The first is employee relations. Simply defined, this is: "You and your fellow employees in a happy, healthy environment." By healthy, I do not mean free from disease alone. I mean healthy from the standpoint of thoroughly satisfactory equipment to accomplish each organizational mission. Employee relations are the very essence of any public relations program. Good employee relations include such things as wages commensurate with those for similar jobs in the area; usual number of holidays; candid and congenial employer-employee relationship; employee periodical; sick leave; retirement, etc. Even coffee breaks are important. When employees fail to speak well about their firm, they are quite obviously doing an ineffectual job of selling its products or dispensing its services. Employees who feel that they are not being treated properly are certainly not going to represent favorably their organization to the public. One has only to recall the unpleasant impression he may have had when he heard an employee speak poorly of his company to realize how true this is.

The second part of a public relations program is customer relations. Customer relations is:

> The efficiency with which the service policies of the company are executed by its employees taken in conjunction with the customer reaction to the carrying out of these policies.

Customers, obviously, are rather important people. Reflect for a moment on what business would be if it did not have customers! Yet some of the things that employees say about them—about the very people who make their jobs possible—could, if the situation were allowed to continue, prove disastrous. We have all had someone come to us, at one time or an-

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other, for professional or business services, and that day or the next we may have gone to him seeking his distinctive service. How would we like to be treated? Well, certainly, that should be an excellent working standard for the way we should treat him. Yes, the practice of the Golden Rule and the full realization that customers are human are keys to good customer relations.

THE third part of a public relations program is called community relations. This final element may be described as follows:

> Community relations comprises the total impact—both physical and moral —of the organization as a whole on the life of the community.

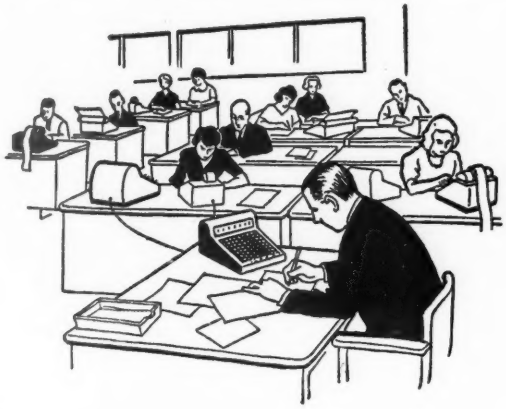
This is based on the sound philosophy that individuals owe a debt to their community. The community in which we live is the good place that it is because of what others have done before us. We are all indebted to the cumulative effort of everyone who has wrought and toiled before us, and each has the responsibility not only to pass on this heritage of achievement but to augment it for posterity. We are earning a living, raising our families, enjoying life, and therefore we have the responsibility of adding our bit to make our community an even better place. The Good Book constantly reminds us of the inevitable laws of reciprocity in such texts as "Give, and it shall be given to you." Notice that the give comes before receiving. We all know of individuals and businesses that do nothing but take out, never putting anything back into the community. This, of course, is extremely selfish and ungrateful and not conducive to a healthy, normal society. Firms can fulfill their obligation in many ways: by lending their employees' time to worthy causes; by volunteering their equipment; by giving money; and by many other means. Yes, all of us, whether as individuals or as concerns, owe a debt to our community for giving us the opportunity to enjoy the good life.

You and Public Relations

THE third and most important aspect of public relations is *you.* You have noticed that the major ingredient of the definitions as well as of the program that we have been discussing is people. People are the only important things in this world. Yet this inescapable fact is not often realized. What a strange world it would be without people! What a strange world this was after the fifth day of creation! A planet was created with every form of plant, animal, and mineral but with no human beings to give it all a meaning.

You, as one of these people, are the most important thing in the world. As people, all of us have as our aim in going on living in this world, the attainment of personal happiness. A man's right to life, liberty, and the pursuit of happiness is a tenet of all western civilization—indeed, of any civilization worth the name. Each of us has a different set of values for his happiness. One may think that it comes from being governor of his state; another may have as his goal a luxurious automobile; another, perhaps, a large family; still another, to be the head of his firm; and so on.

Each of us has his own life's goal, which constitutes happiness in his own



Ideals Which Underlie Public Relations

"TOLERANCE is another public relations indispensable. I do not mean tolerance as applied to race and religion, but just the little tolerances that must be exercised in spending hours with people at desk length. We all have idiosyncrasies. We can be patient with those of others. They, too, have rights and privileges. Public relations have a height, breadth, and depth as great as the scope of humanity itself. There is one point, however, that transcends all others. It is sincerity. It is the summation of all decency; it is the basis of all trust and security; it is that which we value most in our friends."

eyes. It is not any one isolated fact or circumstance that makes us happy, but the cumulative result of a lot of little pleasant experiences and these enjoyed not selfishly nor isolatedly but in the friendship and companionship of others. This is nothing but an aspect of public relations.

MOST of us spend more than one-third of our adult lives at our vocations. A lot of us may think that we work only from eight to five, with an hour off for lunch. Well, isn't it actually much more than that? It takes a considerable time for most people to get from their homes to their jobs. Moreover, while getting dressed in the morning, many of us think of what we have to do that day. Later, during the noon hour, what happens? Usually we will lunch with fellow workers or business associates. What do we talk about? Generally, it is something in connection with our jobs or, let's face it, about some other employee. Again, we have to devote the time to the trip home after quitting time. Besides this workday preoccupation, how many of us must go on thinking about our work during the week end and, yes, sometimes even while tossing at two or three in the morning? Hoping

that not many wives will read this, I might mention that many businessmen must spend more time with their secretaries than they do with their wives! In effect, we spend more time with our business and organizational associates than we do with our loved ones.

Now, then, if our goal is happiness, does it not follow that we should make this working third of our life a happy experience? Wouldn't it be horrible on the Day of Reckoning to have to admit that we wasted one-third of our life not really living but just making money?

How can we prevent this waste? Each of us at some time or other is required to take inventory for his firm, whether daily, monthly, or annually. Why? Such inventory is for the sole purpose of seeing how we are doing—checking on our progress towards a successful business. If, in the process, we find something that will not lead to success, we immediately make the needed adjustment. Yet, how many people, who are essential to their firm and the most important beings in the world to themselves, actually take their own inventories to thus check on progress towards the goal of happiness? If it is mandatory for the firm, it ought to be mandatory for the individual —the all-important component of that firm.

There are many ways of taking inventory on ourselves. But we must be honest and forthright. We cannot rationalize.

In our inventory we must include human relations, because we work in close proximity with other human beings. Let's apply Newton's law of inertia to human relations. (It always seemed to me that he was talking about anything but inertia when he established this law.) Newton's law in effect says that every action precipitates an equal and opposite reaction. Every action on the part of one human being causes a reaction on the part of those affected by that act. Sometimes it may not seem to be equal or opposite, but it certainly is a reaction.

Here are some suggestions that cause proper reactions and an immeasurable increase in happiness. First among these is a smile. Physiological experts tell us that it takes some 16 or 17 muscles to smile, but it requires some 55 or so to scowl.

The terrific contrast in both the economy of movement and the gain in friendly human relations is obvious! How many people are there who like to do things the hard way! A smile is very contagious. Have you ever tried to be difficult or demanding with a person who has a pleasant smile? Since we are going to spend the day with our fellow employees, how much more pleasant it will be if we smile at them instead of scowl! It has been said that we are not properly dressed for work until we put on a smile. All of us have mornings when we feel grumpy—just one of those days when perhaps we should have "stood in bed." It so happens, however, that while dressing we are confronted by the mirror. It never lies, it always sets truth in sharp perspective. On those mornings when we feel that way, why not smile at ourselves? It may seem a bit difficult at first, but we cannot blame the mirror. The smile pays off and with big dividends, if we learn to smile all over —not just with the lips. A smile can be understood in any language.

PUBLIC RELATIONS START AT HOME

ANOTHER invaluable asset in our day-to-day living as easily managed is a friendly "hello." This is another of the good things in life that is absolutely free.

Some folks will fail to reply to a cheery "hello." Instead they carry a look that seems to say, "As soon as you leave or die the better I will feel about it." Or does their manner seem to exclaim: "Do I have to look at you again?" But the hello is a friendly, invigorating salutation which will get results eventually. Even Scrooge, himself, would respond sooner or later. Hello carries with it no monotony. It is as new and zestful now as it was when first uttered. Its efficacy in dispelling gloom and injecting a spirit of fellowship among all within earshot is especially effective if the one who says it happens to be the boss. Bosses are very important people. It is nice to be important, but it is much more important to be nice.

Extremely important to good public relations is the deft use of people's names. One's name—one's good name—is each person's most treasured possession. If someone were suddenly to ask us who we are, we would doubtless repeat our names. It is instinctive. You are a name—you are the personality identified by that name. You are not a size, a complexion, nor a number.

If you are blessed with children, the most valuable thing you can leave them is a good and honorable name. You may be doing them no lasting favor by leaving large quantities of material things, but certainly you will provide them with a good start to happiness and true success in bequeathing to them a good name. There is no sweeter music to our ears than our own name properly pronounced and in a good connection.

RECENTLY I had a little unpleasant experience in connection with my own name. I telephoned to the office of a prominent attorney in our community. His new secretary did not recognize my voice. When she said he was out, I asked the young lady to have him call Ed Combatalade. She said something like this: "W h a tttt?" So I repeated, "Ed Combatalade," and she then said: "Can *you* spell that?" Desiring to help train my friend's new secretary in secretarial amenities, I informed the young lady that I had been spelling it for years and felt that I could spell it just once more. Since questions seemed in order, I suggested that I have the privilege of a couple of my own. First, did she have pencil and paper handy? You know, in this typewriter-ridden world most secretaries do

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not. Second question, could she write? It was all as legitimate as asking me if I could spell my own name. By that time the young lady was stammering and apologizing. I told her it wasn't a bit necessary, that my name was unusual; however, it was an honorable one and that I do my best to keep it that way.

Yes, names are important. When doing business with a customer it is well to use his name. Use it often, and use it correctly. No one will ever take offense at your asking him to spell his name. In effect, you are complimenting him by wanting to know exactly how it is spelled and pronounced.

ANOTHER priceless asset that costs absolutely nothing is courtesy in day-to-day living. How many of us go home in the evening and berate or even paddle our children for not saying "please" and "thank you" and so on. Yet adults constantly neglect these little but very important matters. Courtesy is truly contagious, and we should immediately start an epidemic. The author of the following is unknown to me:

> I am a little thing. I cost nothing. I am worth more than gold to you. The more you use me, the more you have. I unlock doors, open hearts, dispel prejudices. I make friendships. I inspire respect and admiration. I am always welcome. I bore nobody. I violate no law. No one condemns me. I am pleasing to everybody. I am indispensable. I am *courtesy.*

Tolerance is another public relations indispensable. I do not mean tolerance as applied to race and religion, but just the little tolerances that must be exercised in spending hours with people at desk length. We all have idiosyncrasies. We can be patient with those of others. They, too, have rights and privileges.

Public relations has a height, breadth, and depth as great as the scope of humanity itself. There is one point, however, that transcends all others. It is sincerity. It is the summation of all decency; it is the basis of all trust and security; it is that which we value most in our friends. Our smile must be sincere; our hello must be sincere; we must be sincere in our courtesies and tolerances. To me—and I am sure we all share the feeling—it is the measure of the value of every human action.

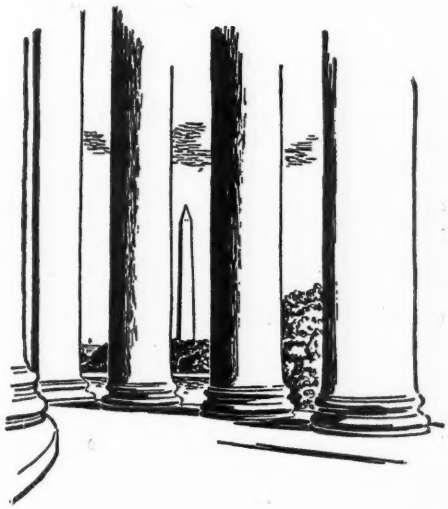
It is that which gives one's pledged word its value and is the very heart beat of all human relationship whether this be between individuals or nations.

IN the final analysis, public relations is not just an intangible cliché. It is an indispensable principle underlying the sound operation of any business. Its proper use can be measured in good will and economic gains. The extent of these gains depends on you—for *you* are public relations.

"BRITAIN'S *nationalized railroads are testing a system for heating waiting rooms of small stations—at the passenger's expense. Gas and electric heaters, controlled by coin slots, are being installed in three wayside stations. For one penny a passenger will get about ten minutes of warmth.*"

—EXCERPT *from Chicago Daily Tribune.*

Washington and the Utilities



Gas Bill Maneuvering

As opposing sides maneuvered for position, the Democratic leadership in the Senate was expected to take up, during the latter part of January, the controversial Fulbright Bill to amend the Natural Gas Act. Even before debate got under way, preliminary sparring from both sides indicated that a nip-and-tuck parliamentary battle was in prospect as opponents of the bill planned to wear down the support by amendments and debate.

One of the earliest amendments to appear in the Senate came from a representative of a coal-producing state, Senator Kilgore (Democrat, West Virginia), who said he took no direct stand on the Fulbright Bill to exempt gas producers from FPC control. Kilgore's amendment, however, would require the FPC to "give effect to sound principles of conservation in the administration of this act." Although innocuous on the surface, Kilgore's amendment—if approved—could upset the timetable of the Senate leadership, which wants to get the bill approved as quickly as possible.

Senator Kilgore said his amendment would be designed to correct "certain deficiencies" in the measure, sponsored by Senator Fulbright (Democrat, Arkansas). Noting that the bill would make additional gas available for distribution, Senator Kilgore said his conservation amendment would "make certain that the small reserves left are not dissipated against the best interest of the public." The Senate Democratic leadership is believed anxious to get the bill through without any amendments to avoid another House battle in a presidential election year. The bill would have to go back to the House if it is amended.

An opponent of the bill told a meeting of gas distribution companies in Washington on January 9th, that consumer price of natural gas will "soar and soar" if the Senate passes the Fulbright Bill. He was Chairman H. Lester Hooker of the Virginia State Corporation Commission. Hooker shared the speaker's platform with Senator Wiley (Republican, Wisconsin) in the meeting of gas companies which are trying to beat the bill. Senator Wiley said: "We definitely do not have a margin of superiority to defeat the bill" but "Senators who are un-

committted will swing the vote either way."

"States' rights and private enterprise are not issues in this bill," as the proponents of the legislation argue, Hooker said. "This is an interstate problem. Now that people have invested their money in natural gas equipment, the producers want to take advantage of it and increase their costs," he stated.

Monroney's "Publicity" Bill

A SUPPORTER of the Fulbright Bill, Senator Monroney (Democrat, Oklahoma), drew fire from the opposition when he introduced a bill which he said was designed to show the true cost of natural gas service in the District of Columbia. Aimed at the Washington Gas Light Company, Monroney's bill was not an amendment to the Fulbright Bill, but a separate measure which was referred to the Senate District of Columbia Committee. As this committee functions under the chairmanship of Senator Neely (Democrat, West Virginia), a likely critic of the Fulbright Bill, Monroney's proposal was not expected to get very far at this session. But it is likely to have the effect of injecting into the Fulbright Bill debate, charges and countercharges as to the relative allocation of the gas consumer's dollar among the producer, pipeline company, and the distributor.

Monroney's bill, cosponsored by Senators Fulbright, Daniel (Democrat, Texas), and Anderson (Democrat, New Mexico), would have the Washington gas utility company print on the face of its monthly bill the average price per thousand cubic feet for which producer sells gas at the well to the pipeline company, average price the pipeline company charges the distributing utility for gas delivered in Washington, and the ultimate retail price charged the household consumer by the distributing utility.

Senators Monroney and Schoeppel (Republican, Kansas), both from gas-producing states, heatedly defended the measure against an attack from Senator Wiley of gas-consuming Wisconsin. Wiley had urged the public to send the Senate an "avalanche of protests."

FPC Producer Cases

THE FPC has received a total of 13,531 rate filings from independent producers of natural gas in the first eighteen months following the U. S. Supreme Court's decision of June 7, 1954, in the Phillips Petroleum Company Case (3 PUR3d 129), according to figures released by Chairman Jerome K. Kuykendall.

The Supreme Court in the Phillips decision ruled that provisions of the Natural Gas Act apply to producers engaged in the sale of natural gas in interstate commerce for resale or in the transportation of natural gas in interstate commerce.

The filings, made during the period from June 7, 1954, to December 1, 1955, included a total of 3,229 rate increases, amounting to $48,546,537 annually. The FPC suspended 221 of these increases, totaling $15,798,041 per year. Of the suspended increases, 189 (totaling $14,707,869 yearly) were still pending as of December 1, 1955.

The filed increases included 1,978 tax increases, for $6,904,444 per year, and 1,030 other type increases, totaling $25,844,052, all of which were allowed without suspension. Seventeen increases, for $761,197, were suspended but later allowed without hearing, and 15 others which the FPC suspended were subsequently reduced and withdrawn.

In addition to the increases, 1,183 tax rate decreases, totaling $1,240,092 yearly, were accepted for filing.

A breakdown of the 13,531 filings shows that 7,038 were for rates in effect as of June 7, 1954; 1,097 were for new services; 4,999 involved rate schedule changes; and the remaining 397 were for various other filings.

THE accompanying tables show the number and type of filings received during the June 7, 1954-November 30, 1955, period, and the number, type, and dollar amount of rate filings for changes in rate level acted upon by the FPC as of July 1, 1955, and December 1, 1955.

The Eisenhower Message

THE President's third annual State of the Union message, read to Congress last month, was generally of a liberal tone—to be expected in an election year. But no change was noted in the few brief references to administration policy on electric power matters. President Eisenhower reported that the over-all national economy was in "splendid shape." He opposed the tax cuts whose only lasting result this time might be inflation until the budget is balanced for the coming fiscal year.

Most business people had probably realized that increased political pressures engendered by the election would militate against any downward shift in the 52 per cent corporate income tax. In that sense, the President's message only recognized the inevitable.

Spending for foreign aid was equally and routinely at high levels. The generally liberal tone was noticed with respect to the administration's domestic program, which included, as in previous years, a big highway-building program, a request for amendment of the Taft-Hartley labor law, new public housing units, expansion of social security coverage, higher mail rates, and a new and experimental program of flood damage indemnities for aid to disaster victims.

The Eisenhower position on natural resource policy remains the same—with emphasis on faster progress through "partnership" programs. The President again recommended congressional approval of

STATISTICS RELATIVE TO INDEPENDENT PRODUCER FILINGS FOR CHANGES IN RATE LEVELS AS OF JULY 1, 1955, AND DECEMBER 1, 1955

	As of July 1, 1955		*As of December 1, 1955*	
	Number	*Amount*	*Number*	*Amount*
Tax Rate Increases Filed and Allowed without Suspension ..	1,898	$ 6,757,083	1,978	$ 6,904,444
Other Rate Increases Filed and Allowed without Suspension	611	11,986,084	1,030	25,844,052
Total Rate Increases Filed and Allowed without Suspension	2,509	18,743,167	3,008	32,748,496
Rate Increases Suspended but Later Allowed without Hearing	17	761,197	17	761,197
Rate Increases Suspended and Later Reduced and Withdrawn	15	328,975	15	328,975
Rate Increases Suspended and Pending	92[1]	11,055,017[1]	189[2]	14,707,869[2]
Total Rate Increases Suspended	124	12,145,189	221	15,798,041
Total Rate Increases Filed	2,633	30,888,356	3,229	48,546,537
Tax Rate Decreases Filed and Allowed without Suspension	30	34,592	1,183	1,240,092
Other Rate Decreases Filed and Allowed without Suspension	—	—	2	140
Total Rate Decreases Filed	30	34,592	1,185	1,240,232

[1] Covers 80 dockets.
[2] Covers 169 dockets.

STATISTICS RELATIVE TO NUMBER AND TYPE OF INDEPENDENT PRODUCER FILINGS RECEIVED JUNE 7, 1954, THROUGH NOVEMBER 30, 1955

June 7 Rates	*New Services*	*Rate Schedule Changes*	*Other Type Filings*	*Total*
7,038	1,097	4,999	397	13,531

such wholly federal projects as the Colorado river storage project and the Fryingpan-Arkansas project, though the political future of both is as dim this year as in the past. On the other hand, the President formally asked for passage of John Day dam "partnership" project legislation for the first time. He also seeks other unspecified projects which "provide for co-operative action between the federal government and nonfederal interests," and action on legislation which makes provision for federal participation in small projects under the primary sponsorship of agencies of state and local governments. It is also worthy of note that the President failed to mention any plans of the administration to seek TVA steam plants or to support TVA revenue bond financing this year.

Congressional Developments

ATTORNEY General Brownell is not expected to take kindly to the resolutions offered by Democratic Senators Kefauver (Tennessee), Anderson (New Mexico), and O'Mahoney (Wyoming) for a special counsel to defend the government in the Dixon-Yates Case. The resolution, also sponsored in the House by Democratic Representatives Price (Illinois) and Holifield (California), would authorize presidential appointment of such special counsel with Senate confirmation. But Justice Department lawyers are said to feel they are competent to handle the government's defense in the court of claims, even though both the Justice Department and the AEC had previously declared the Dixon-Yates contract to be valid.

Kefauver and Anderson argue as precedent the appointment of a special counsel to represent the government in the famous Teapot Dome scandal, unveiled by a Senate committee. But it is pointed out that even in that case when the Attorney General's office itself was under suspicion, the appointment of special counsel was made by former President Coolidge.

Senator Neuberger (Democrat, Oregon) has asked Congress to revoke the license FPC has granted to the Eugene (Oregon) Water and Electric Board for construction of the 30,000-kilowatt Beaver Marsh project in Oregon, in a bill (S 2877).

CHAIRMAN Buckley (Democrat, New York) of the House Public Works Committee has shifted his stand on Niagara redevelopment project legislation. He introduced a new bill last month (HR 8109) to join Senator Lehman (Democrat, New York) in seeking development by the state authority, with full federal-type preference clause provision. On the other hand, Representative Cole (Republican, New York) has asked that New York state voters should be allowed to settle the long-standing dispute over who should develop the project by referendum at the general elections next fall. Cole has been a supporter of bills for redevelopment of power by five public utility companies.

A Senate Public Works subcommittee agreed recently on a $750,000,000 borrowing power under a proposed self-financing plan for the TVA. Chairman Kerr (Democrat, Oklahoma) said the subcommittee reached the agreement on his bill to permit the TVA to issue its own bonds to raise its own capital. The administration has approved a somewhat similar program. Kerr said the subcommittee also made "considerable progress" towards language that would fix the relationship between the TVA and the Secretary of the Treasury in such bond issues. Kerr said the objective is to require "consultation and co-operation" without giving the Treasury any "veto power."

Wire and Wireless Communication

Big Year Ahead for Telephones

THE year just past was a period of great progress for the Bell system, President Cleo F. Craig of the American Telephone and Telegraph Company said in his report to share owners which accompanied the January 10th dividend. "Improvement in earnings has strengthened the position of share owners. We have made big gains in service to the public," he said.

Bell system earnings for the 12-month period ending in November were $13.01 a share on AT&T stock, Mr. Craig reported. "This is an encouraging improvement, and a necessary one," he told share owners. "The earnings retained in the business, after payment of dividends, provide needed protection for your investment. They will also help furnish funds to build the large amount of new facilities that will be required in 1956." He continued:

> Orders for service in 1955 were the highest in years. The Bell companies added some 2,850,000 telephones, nearly 50 per cent more than in 1954. The gain of about 900,000 in the last quarter was the second largest quarterly increase we have ever had. Long-distance conversations were up about 12 per cent for the year—much more than the average annual growth.
>
> To meet the great increase in the volume of business, the system invested more than $1.6 billion in new and improved telephone facilities. This was the largest construction program in our history. Yet next year we shall need another one like it, and perhaps even larger. As the country grows, Americans want more telephone service and we are going right ahead to provide it.

Mr. Craig commented on the recent debenture issue. He said nearly half of the debentures already have been converted into stock.

MR. CRAIG also called attention, as "revealing the kind of spirit that builds telephone progress," to a special feature in the report pamphlet which told about some of the more than 1,500 telephone men and women who have been awarded Vail medals for acts of noteworthy public service since the awards were instituted in 1920.

The January 10th dividend checks were mailed to about 1,390,000 share owners in over 19,000 communities throughout the nation. Included in this figure are approximately 225,000 Bell system employees.

In Canada, Thomas W. Eadie, president of the Bell Telephone Company of Canada, said that "it will be necessary for the telephone industry to increase its capital spending in 1956." He stated:

> A continued increase in the level of business activity in Canada is expected for the first half of 1956. In all probability the increase will be at a slower rate than has been the case in 1955 and some leveling off may occur in the latter part of the year. This expansion could result in Canada's gross national product moving from a total of over $26 billion in 1955 to over $27 billion in 1956, an increase of some 4 per cent.

IT&T Gain in Electronics

International Telephone & Telegraph Corporation, through its manufacturing divisions, made capital expenditures of $38,000,000 in 1955. Expenditures are expected to be higher this year.

The company scored advances in electronics during the past year, one of the principal ones being the announcement and demonstration in September of a radio navigation system for aircraft, known as Tacan (tactical air navigation).

The system is designed to provide the pilot with continuous information instantly, automatically, and with accuracy both as to distance and direction of flight relative to a fixed ground station. The system, under development since 1948, was designed for the U. S. Air Force and the Navy by Federal Telecommunications Laboratories, research division of the company.

The company has demonstrated a compact, light, and relatively inexpensive unit to meet the requirements of the private aircraft owner. The company's Federal Telephone and Radio division has already started large-scale production of the unit for military use.

Radio Corporation of Porto Rico, an IT&T subsidiary, is preparing for the operation of "over-the-horizon" telephone transmission between San Juan, Puerto Rico, and Ciudad Trujillo in the Dominican Republic, a distance of 237 miles. This will be an important development in "over-the-horizon" propagation. No repeater stations will be required as the new technique can span distances of 200 to 300 miles without the use of intermediate relay stations.

Principal reason for installation of the link is the need for additional telephones occasioned by the influx of new industries and the increased tourist trade in the Caribbean area. A new frequency-modulated radiotelephone, designed especially for VHF radio communication in shipboard service, has been developed by the marine division of Mackay Radio & Telegraph Company.

The largest metropolitan crossbar exchange put into service thus far by Kellogg Switchboard & Supply Company was opened in the Las Vegas office of the Southern Nevada Telephone Company last August, bringing dial service to 23,000 subscribers.

Western Union

Western Union Telegraph Company is benefiting from the growing demand for private wire systems. Leasing of such networks to industry and government has increased the telegraph company's revenues from this source from $6,200,000 in 1948 to a current annual rate of $30,000,000, according to Walter P. Marshall, president. He termed 1955 "a year of outstanding financial and technological progress for the company."

Western Union had net income of $10,-

300,615 from operations for the first ten months of the year, which exceeded the entire year's earnings for 1954.

The rapidly growing use by industry of data processing equipment is an important factor in increasing the demand for Western Union's private telegraph systems. A 12,000-mile network, the first system specifically engineered for data transmission, is now being installed for Sylvania Electric Products, Inc.

REA Notes Telephone Progress

ABOUT 135,000 farms and other rural establishments will get new or improved telephone service as a result of telephone loans made by the Rural Electrification Administration in 1955, the U. S. Department of Agriculture reported. During the year the agency made 188 telephone loans amounting to $66,808,000. These were long-term, low-interest loans to help telephone companies and co-operative associations improve and extend service in rural areas. Ninety-nine of the loans were made to new borrowers which had not previously used REA financing.

In 1954 REA made 147 telephone loans amounting to $66,346,000. Seventy-seven of these were to new borrowers. Telephone loans during the last half of 1955 made up nearly two-thirds of the total for the year. One hundred and six loans for $40,073,000 were made during this period. Applications for additional loans which came to REA during this same period indicate a sustained loan level of approximately $80,000,000 in the telephone program for the fiscal year which ends June 30, 1956.

Total net loans since the start of the REA rural telephone program in October, 1949, stand at $273,000,000. They provide new or improved service to about 600,000 subscribers. Close to $125,000,000 has been advanced to borrowers.

Confidence of progress in the rural telephone field was the keynote of the two-day meeting of the REA committee of telephone consultants in Washington last month. The committee is composed of representatives of the telephone industry (independent and Bell telephone companies), telephone co-operative borrowers, and REA specialists. The committee considered a number of matters of mutual interest, including engineering, accounting, management, and procedural problems of REA rural telephone borrowers. It also considered lending support to the forthcoming battle in Congress to obtain compensation for utilities in connection with relocation expenses due to federal-aid highway construction. The committee is conducting a survey of telephone industry opinion of REA. In general, however, the meeting reflected optimism that the rural telephone program will register notable gains throughout this year.

THE intent of Congress is the keynote of the REA rural loan program, according to REA Administrator Ancher Nelsen. At a press conference covering the work of the REA committee, Nelsen said that the congressional intent was to bring more telephones to more farms and to insure a higher quality of service—not simply to make loans as such. In carrying out this intent, Nelsen said, REA has sought to enlist the co-operation of the telephone industry as a whole as well as co-operatives. It was pointed out that during the period of the REA program—virtually since 1950—the number of farm telephones has increased 13.2 per cent, although the number of farms has declined a little more than 11 per cent during this same period. The installation of modern, high-quality farm telephone service has now nearly equaled the numerical high point of old-fashioned farm telephone service.

Financial News and Comment

By OWEN ELY

Slow Progress in Power Reactor Development

CHAIRMAN Anderson of the Joint Congressional Committee on Atomic Energy recently criticized the Atomic Energy Commission for its tardiness in giving businessmen access to the commission's files of secret information relating to potential commercial developments. Since then AEC has announced a new procedural rule on the subject.

The AEC on January 18th issued its long-awaited licensing regulation under which private industry may build and operate plants for use, production, and processing of nuclear fuels. The regulation, making final proposed rules published some time ago, becomes effective February 18th. It is broad enough to permit private industry, if it wishes, to build and operate under AEC license vast billion-dollar production plants like those at Oak Ridge, Tennessee, or Savannah River, South Carolina. Industry has manifested no such desire, however, although ultimately it may take over manufacture of atomic fuels and explosives from the government. The new regulation governs primarily atomic research and medical facilities, atomic power plants, plants for recovery of valuable materials from used nuclear fuel, and "critical assemblies" for testing various fuel shapes and mixtures.

Some of the utility companies which are planning construction of atomic reactors are probably also disappointed that the commission is proceeding so slowly. The Westinghouse-Duquesne plant, which may be almost "obsolete" when it is completed next year, because of the high operating costs, is the only plant actually under construction. While some preparatory work has been done on the others, such as land purchases, preparation of plans and sketches, etc., the general status seems to be as follows:

Consumers Public Power District—contracts with AEC being negotiated.

Detroit Edison (Power Reactor Development Company)—contract negotiations with AEC proceeding.

Yankee Atomic Electric—still under study by AEC.

Commonwealth Edison (Nuclear

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Power Group)—application for license to build applied for.

Consolidated Edison — application for construction license applied for.

Pennsylvania Power & Light—no details.

However, the AEC is gradually making progress and it is possible that Senator Anderson's impatience may help to expedite the remaining steps needed to get the power reactor program "rolling." As detailed in the *P.U.R. Executive Information Service* letter of January 20th, the AEC is now ready to license operators of reactor controls and by-product materials. Hearings before the congressional committee were scheduled for the end of January.

ONE important obstacle has now been overcome. Some 70 capital stock casualty insurance companies recently announced the creation of a syndicate to underwrite radiation hazards on industry-operated nuclear reactors, according to *The New York Times*. The mutual companies were also reported working out their own version of the plan, which will assure the availability of some coverage well in advance of the completion of any of the proposed nuclear power projects.

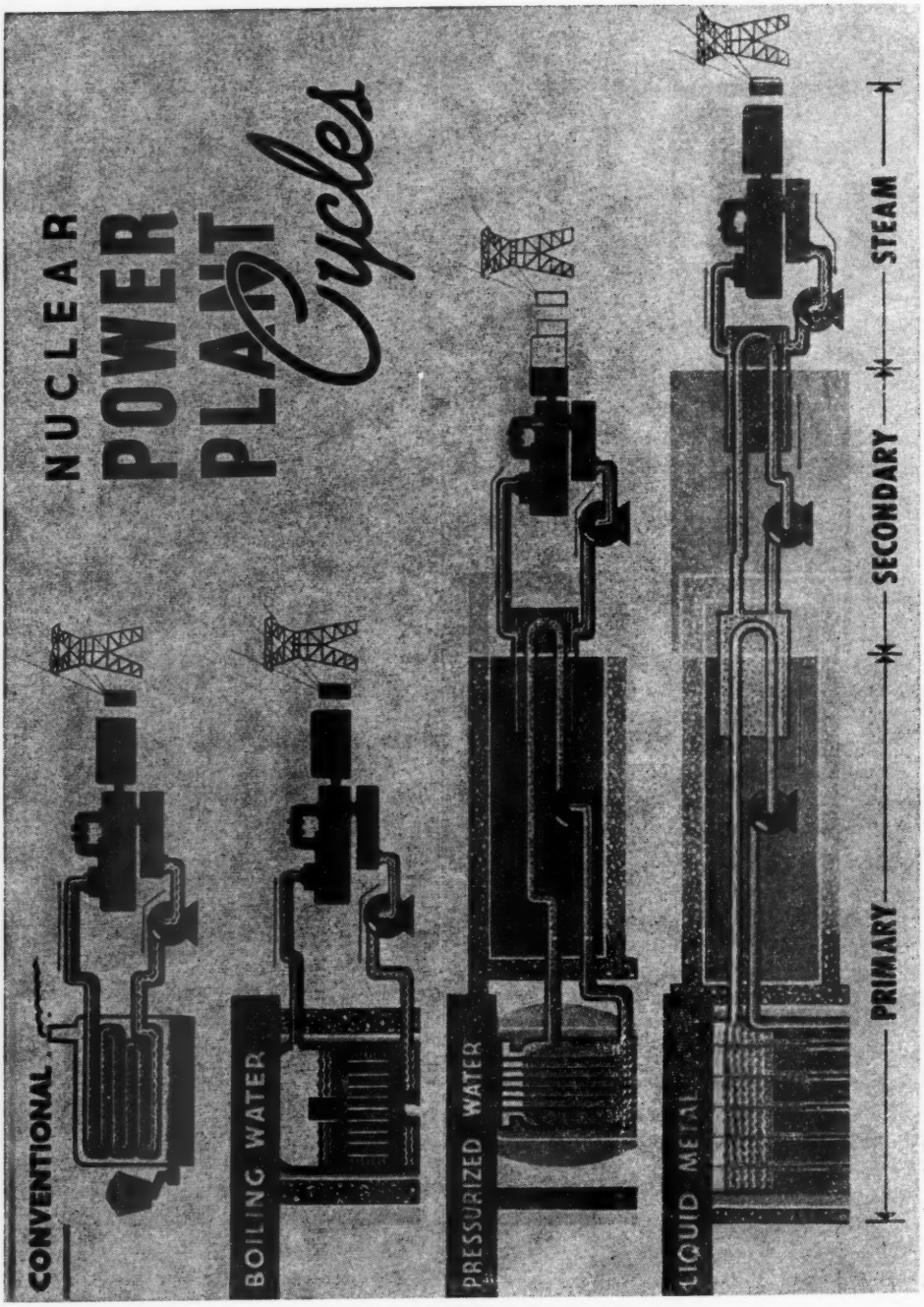
Tentatively, it was indicated that the syndicate will guarantee $50,000,000 coverage for each of the projects announced thus far. This would insure construction, installation, operation, and maintenance of nuclear reactors used for industrial, commercial, research, and experimental purposes. The actual coverage would be for "third-party bodily injury, and property damage liability insurance against loss or damage caused by radiation." For coverage of the reactor itself and of the utility employees connected with it, it was indicated that individual fire and casualty companies would be the logical insurers. Still unsolved, apparently, are some problems relating to damage to streams, materials, etc., resulting from exhaust gases or waste.

THE AEC held a "Press Seminar on Civilian Power Reactor Development" on December 6th, but much of the information supplied orally to press representatives seemed vague and confusing, particularly with reference to possible operating costs. Thus, according to Admiral Rickover, the estimated cost of electric power from the first core at Shippingport, Pennsylvania, will be as follows:

	Millions Of Dollars	*Mills Per Kwh*
Capital Costs	$45	15
Fuel Charge (Mainly Fabricating)	18	39
Operating Cost	—	3
Total	$63	57
Credits-Chemical Reprocessing	—	5
Net Cost		52

These costs are for the first core, which is expected to last 3,000 power hours. The plant will operate at only 10 per cent capacity the first year, and gradually working up to a normal 80 per cent by the fifth year. The cost for the second core, reflecting improved technology and fabrication, is estimated at 39 mills per kilowatt-hour, while the third core is expected to produce at only about 14 mills. (However, it may take about ten years to reach this stage.) Even this cost is high, of course, as compared with modern coal-burning plants.

KENNETH DAVIS, director of the commission's division of reactor development, stated in reply to questions that "if you take one extreme case where you would perhaps not make any material for what you burn up, then this cost of the



Source, Atomic Energy Commission

nuclear material itself would probably be several mills per kilowatt-hour, probably as much as 6 or 7 mills per kilowatt-hour. On the other hand, if I go to the other extreme of a breeder, it is conceivable I might actually be ahead. There would be no cost for this particular part of the operation. Typically I would say, in a heterogeneous type of reactor, the sort that we think may be used in the next few years, this might perhaps be one or two mills simply for the net value of the material that is actually consumed. To this you must add the cost of the fabrication. This looks as though for some types of reactors it might be low. For other types it still looks like it is pretty high."

One of the reporters called attention to the rather wide disparity between over-all cost figures per kilowatt-hour presented by the AEC and those issued by industrial concerns interested in constructing reactors.[1] Dr. Davis replied in part:

> You will find that the General Electric Company, which is the contractor for the reactor for Commonwealth, is not planning to have this built much before 1959. I don't believe they will claim that this reactor will be economic without a $15,000,000 contribution by General Electric in the form of research and development. It is easy to talk about this thing being just around the corner. But I have not seen anybody yet who has proposed to build a reactor which will be completed in a short period of time who will make the statement that it will really be economic.

THERE was some discussion of the application of nuclear reactors to produce heat for industrial use rather than electricity. A high temperature, gas-cooled reactor for gas turbine operation was said to be in the "component development stage." About one-third of the fuel burned in the U. S. is used for space-heating purposes, but AEC representatives indicated that it would be difficult to develop any connected space-heating load large enough to be serviced by a nuclear power plant. Nuclear power comes only "in the large economy size," it was suggested.

However, there was some mention of use of atomic plants to generate heat for the gasification of coal to make water gas and to synthesize hydrocyanic acid gas. The major difficulty is to obtain the right refactory materials which will readily conduct temperatures of several thousand degrees without being themselves melted or consumed.

IN a talk on industrial applications of atomic power before the American Association for the Advancement of Science on December 29th, Dr. Davis pointed out that about 70 per cent of the reactor development program is still concerned with military applications of atomic power, such as ship or aircraft propulsion, or as sources of power for remote bases. The reactor program has had several phases:

(1) The seven small pilot plants being constructed and/or operated by the AEC itself. One of these was scheduled for "operation at full power" in 1951, one in 1953, one in 1955, two in 1956, and one each in 1957 and 1959. The first one of this series, the homogeneous reactor experiment No. 1 at Oak Ridge, has been completed and the reactor dismantled; and experimental breeder reactor No. 1 has also been successfully operated for some time.

(2) The five-year program for power reactor development, announced in March, 1954, five types of reactors being selected for development. Of these five types the pressurized water reactor (PWR) re-

[1] See PUBLIC UTILITIES FORTNIGHTLY, July 21, 1955, pages 111-113; and September 1, 1955, pages 330-335.

SUMMARY OF PROTOTYPE POWER REACTOR PLANT

Company	Westinghouse* Electric and Duquesne Power & Light Co.	Consumers Public Power District	Yankee Atomic Electric Co.	Power Reactor Development Co. (Detroit Edison et al.)	Nuclear Power Group (Commonwealth Edison et al.)	Consolidated Edison Company
Location	Shippingport, Pennsylvania	Nebraska	Western Mass.	Detroit Edison Service Area	Near Chicago	Indian Point, N. Y.
Type of Reactor	Pressurized Water (PWR)	Sodium-Graphite	Pressurized Water	Fast Breeder	Boiling Water	Pressurized Water
Thermal Power KW	236,000	250,000	500,000	300,000	682,000	500,000
Generating Capacity, KW	At least 60,000	75,000	134,000	100,000	180,000	250,000**
Amount Fuel KG	12 T natural U	24,600	25,500	2,100	68,000	275 Kg U 8,100 Kg Th
Enrichment w/o U-235	52 KG, about 90	1.8	2.7	20	1.1	About 90 (for U)
Moderator	H_2O	Graphite	H_2O	None	H_2O	H_2O
Coolant	H_2O	Sodium	H_2O	Sodium	H_2O	H_2O
Reactor Temp. °F	540	925	400	800	480	500
Reactor Pressure psig	2,000	300	900	100-200	600	1,500
Steam Conditions	585 psig sat.	800 psig 825°F	160 psia sat.	600 psia, 730°F	600 psia 480°F	420 psia sat.
Estimated Cost of Reactor	$37,700,000	13,500,000	19,300,000	45,000,000	34,200,000	
Estimated Cost of Turbogenerator Plant Cost	$10,000,000	10,800,000	6,700,000	9,000,000	10,800,000	
Total Estimated Plant Cost	$47,700,000	24,300,000	26,000,000	54,000,000	45,000,000	55,000,000
Capital Cost $/KW	630	320	230	540	250	230
Estimated Completion Date	1957	1958-59	1959-60	1959-60	1960	1960

*The PWR is being built by the AEC. The companies shown are prime contractors to the AEC.
**Includes 110,000 kilowatts of conventional superheating capacity.
Source, Atomic Energy Commission

flected the most advanced technology, being the type used in the *Nautilus* and in the Shippingport plant.

(3) The power demonstration program was announced in January, 1955, based on the Atomic Energy Act of 1954. This was designed to be financed primarily by private funds, with some underwriting of research costs by the AEC. As noted above, four proposals were received in response to this program, while two other utilities (Consolidated Edison and Pennsylvania Power & Light) have announced projects which will be privately financed without any government aid.

(4) An invitation for proposals to produce smaller power demonstration reactors (5,000 to 40,000 kilowatts, designed to satisfy the needs of domestic rural areas with high power costs, and the majority of foreign applications) was announced in September, 1955.

UNDER the military propulsion and production programs which were the principal source of reactor technology until two years ago, the objectives differed considerably from those of an industrial reactor program. The object was to produce plutonium with low temperature operation and emphasis on operational reliability, Dr. Davis pointed out. While some valuable experience was obtained with basic technology, this work did not directly further the industrial program. Power obtained from these military reactors, comprising 70 per cent of the commission's program, is only a partial aid to the civilian program.

Each "generation" of industrial power reactors may be said to involve about five to seven years, he estimated, as follows:

Component development and testing	1 to 3 years
Engineering design	1 year
Construction	2 to 3 years
Testing and initial operation	½ to 1 year
Significant operation (first core)	1 to 3 years

DECEMBER UTILITY FINANCING

PRINCIPAL PUBLIC OFFERINGS OF ELECTRIC AND GAS UTILITY SECURITIES

Date	*Amount*	*Description*	*Price To Public*	*Underwriting Spread*	*Offering Yield*	*Moody Rating*	*Indicated Success of Offering*
		Bonds					
12/7	$70.0	Cons. Edison 1st 3⅜s 1985	101.00	.65C	3.32%	Aa	b
12/8	20.0	Conn. L. & P. 1st 3¼s 1985	99.50	.67N	3.28	Aaa	a
12/9	2.5	North Shore Gas 1st 4s 1975	101.38	1.36C	3.90	Baa	d
12/14	10.0	Delaware P. & L. 1st 3⅜s 1985	102.82	.59C	3.35	Aa	a
12/22	3.6	Cascade Nat. Gas 5½% Notes and Common Stock	54.50	3.50N	—	—	*
		Preferred Stocks					
12/1	.3	Penn Fuel Gas Units—$1.50 Pfd. and Common	26.00	N	—		**
12/1	5.5	Western Nat. Gas 5% Conv. ($30 Par)	30.00	N	5.00		***
12/7	12.5	Virginia Elec. & Pr. $4.12	101.73	1.49C	4.05		d
12/8	3.0	Atlantic Gas Lt. 4.44% ($100 Par)	102.25	2.11C	4.34		a
12/14	5.0	Delaware P. & L. 4.20% ($100 Par)	101.82	1.42C	4.13		b
						Earns.-Price Ratio	
		Common Stock					
12/7	7.9	Columbus & So. Ohio Elec.	31.75	.90N	5.04	7.2	a
12/14	.5	Cumberland Gas	10.00	N	—	—	+

+ Not a new issue. *Offered in units of $50 notes and one share of common to stockholders on a 1-for-6 basis. **Offered to public in units of one share preferred and one share of common. ***Included in issue were 110,600 shares offered to common stockholders on a 1-for-20 basis with oversubscription. Remaining shares were subscribed to by the principal stockholder. The issue was 119 per cent subscribed (98 per cent under primary privilege).

The "first generation" is represented by the large prototype reactors now being planned. The cost of power from this generation will "almost certainly not be competitive with conventional power plant costs in the United States," according to Dr. Davis. "In fact, the actual costs will not be known until the plants are built and have operated for some time. . . . perhaps the second or third generation will be competitive."

The accompanying table and chart (pages 178 and 180), reproduced from AEC press releases, may be of interest.

Utility Financing Declined In 1955

UTILITY new-money financing in December totaled only $169,000,000, moderately below the monthly average for the year of about $182,000,000. Very little common stock was offered during the month, presumably because of the holiday period; perhaps the declining trend in the market price of utility stocks, which began early in December, also had a dampening effect. Less than $8,000,000 in common stocks were sold as compared with the year's total of about $352,000,000 for electric utility stocks and $146,000,000 for gas stocks. (In addition, about $46,000,000 worth of stock was sold which represented merely change of ownership.)

In the calendar year 1955, total financing by divisions of the industry was approximately as follows, in millions:

	1955	*1954*
Electric	$1.5	$2.3
Gas	1.0	1.1
Telephone	1.1	.7
	$3.6	$4.1

Refunding operations declined sharply last year, amounting to only $230,000,000 as contrasted with $1,095,000,000 in the previous year.

RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

1954 Rev. (Mill.)			*1/11/56 Price About*	*Dividend Rate*	*Approx. Yield*	*Share Earnings* Current Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Pipelines									
$ 4	O	Alabama-Tenn. Nat. Gas	18	$ .80h	4.4%	$1.60	10%	Sept.	11.3	50%	42%
13	O	Commonwealth Nat. Gas	31	1.20	3.9	2.54	2	Sept.	12.2	47	30
14	O	East. Tenn. Nat. Gas	10	.60	6.0	.54	43	Sept.	18.5	111	14
44	S	Mississippi Riv. Fuel	33	1.40	4.2	1.87	1	Sept.	17.6	75	54
48	S	Southern Nat. Gas	34	1.80	5.3	2.16	16	Sept.	15.7	83	26
143	O	Tenn. Gas Trans.	30	1.40	4.7	1.96	24	Sept.	15.3	71	20
150	O	Texas East. Trans.	28	1.40	5.0	1.74	NC	Mar.	16.1	80	23
68	O	Texas Gas Trans.	24	1.00+	4.2	1.68	8	Sept.	14.3	59	27
63	O	Transcont. Gas P. L.	37	1.80	4.9	2.18	11	Sept.	17.0	83	21
		Averages			4.7%				15.3	73%	
		Integrated Companies									
122	S	American Nat. Gas	57	$2.20	3.9%	$2.88	2%	Sept.	19.8	76%	39%
30	O	Colo. Interstate Gas	54	1.25	2.3	3.99	87	Sept.	13.5	31	29
260	S	Columbia Gas System	16	.90	5.6	1.14	34	Sept.	14.0	79	42
9	O	Commonwealth Gas	7	(a)	4.0a	.55	13	Dec. '54	12.7	—	69
10	A	Consol. Gas Util.	12¼	.75	6.0	.93	D5	July	13.4	81	59
213	S	Consol. Nat. Gas	35	1.70	4.9	2.69	12	Sept.	13.0	63	66
144	S	El Paso Nat. Gas	48	2.00	4.2	2.50	11	Oct.	19.2	80	22
34	S	Equitable Gas	26	1.40	5.4	1.92	3	Sept.	13.5	73	31
12	O	Kansas-Nebr. Nat. Gas	35	1.60	4.6	1.30	D24	Dec. '54	—	123	32
78	S	Lone Star Gas	28	1.40	5.0	2.12	23	Sept.	13.2	66	44

22	S	Montana-Dakota Utils. ..	26	1.00	3.8	1.36	1	Sept.	19.1	73	31
18	O	Mountain Fuel Supply ..	27	1.20	4.4	1.50	NC	Sept.	18.0	80	59
64	S	National Fuel Gas	20	1.00	5.0	1.56	13	Sept.	12.8	64	58
89	S	Northern Nat. Gas	43	2.20	5.1	3.64	61	Sept.	11.8	60	33
37	S	Oklahoma Nat. Gas	24	1.20	5.0	1.81	12	Oct.	13.3	66	32
87	S	Panhandle East. P. L. ..	75	3.00	4.0	4.63	NC	June	16.2	65	34
10	O	Pennsylvania Gas	30	1.00	3.3	1.79	126	Dec. '54	16.8	56	77
146	S	Peoples Gas Lt. & Coke .	150	7.00	4.7	10.43	4	Sept.	14.4	67	37
27	O	Southern Union Gas	23	1.00	4.3	1.33	39	Dec. '54	17.3	75	38
215	S	United Gas Corp.	31	1.50	4.8	2.10	—	Sept.	14.8	71	42
		Averages			4.5%				15.1	71%	
		Retail Distributors									
23	A	Alabama Gas	37	$1.28	3.5%	$2.03	19%	Nov.	18.2	63%	44%
42	A	Ark.-Louisiana Gas	19	.50	2.6	.75	44	Sept.	—	67	49
38	O	Atlanta Gas Light	28	1.20	4.3	2.11	23	Sept.	13.3	57	40
5	O	Berkshire Gas	14	.80	5.7	.97	111	June	14.4	82	37
4	O	Bridgeport Gas Light ...	27	1.40	5.2	2.11	40	Sept.	12.8	66	45
4	O	Brockton-Taunton Gas ..	13	.70	5.4	.65	20	Dec. '54	20.0	108	44
46	S	Brooklyn Union Gas	34	1.80	5.3	2.53	—	Sept.	13.4	71	46
29	O	Central Elec. & Gas	15	.80	5.3	1.30	18	Sept.	11.5	62	16
10	O	Central Indiana Gas	14	.80(b)	5.7	.95	34	Sept.	14.7	84	62
5	O	Chattanooga Gas	5	.30	6.0	.34	D15	Aug.	14.7	88	43
51	O	Gas Service	25	1.36	5.4	1.84	6	Sept.	13.6	74	46
6	O	Hartford Gas	37	2.00	5.4	2.97	NC	Feb.	12.5	67	52
2	O	Haverhill Gas	48	2.60	5.4	3.19	10	Nov.	15.0	82	71
15	O	Houston Nat. Gas	24	1.00	4.2	1.82	D12	July	13.2	55	23
14	O	Indiana Gas & Water ...	19	.92	4.8	1.37	17	Nov.	13.9	67	46
6	A	Kings Co. Lighting	15	.90	6.0	1.11	D12	Sept.	13.5	81	27
40	S	Laclede Gas	15½	.72	4.6	.97	14	Sept.	16.0	74	36
3	O	Michigan Gas Utils.	19	.90	4.7	1.24	23	Dec. '54	15.3	73	41
3	O	MidSouth Gas	11	—	—	.50	—	Dec. '54	22.0	—	30
31	O	Minneapolis Gas	26	1.30	5.0	1.59	35	Sept.	16.4	82	44
13	O	Mississippi Valley Gas ..	19	1.00(d)	5.3	1.68	15	Sept.	11.3	60	29
8	O	Mobile Gas Service	23	.90	3.9	1.52	70	Sept.	15.1	59	31
7	O	New Haven Gas	30	1.60	5.3	2.58	38	Dec. '54	11.6	62	64
10	O	New Jersey Nat. Gas ...	23	1.00	4.3	1.79	31	Sept.	12.8	56	31
62	O	North. Illinois Gas	19	.80	4.2	1.11	NC	Nov.	17.1	72	49
7	O	North Penn Gas	17	1.00	5.9	1.22(g)	NC	Mar.	13.9	82	53
183	S	Pacific Lighting	39	2.00	5.1	2.61	37	Sept.	14.9	77	44
12	O	Pioneer Natural Gas	28	1.32	4.7	1.88	28	June	14.9	70	47
12	O	Portland Gas & Coke	30	.90	3.0	2.23	47	Sept.	13.5	40	41
2	O	Portland Gas Light	11	.75	6.8	1.08	19	Dec. '54	10.2	69	24
8	A	Providence Gas	10	.48	4.8	.52	27	Dec. '54	19.2	92	62
3	A	Rio Grande Valley Gas ..	3	.15	5.0	.26	15	Sept.	11.5	58	62
6	O	Washington Nat. Gas ..	13	.40	3.1	.65	D11	June	20.0	62	60
3	O	South Atlantic Gas	12	.70	5.8	.88	D5	Dec. '54	13.6	80	32
8	O	South Jersey Gas	24	1.30	5.4	1.63	5	Nov.	14.7	80	52
23	S	United Gas Improvement	36	2.00	5.6	2.07	D7	Sept.	17.4	97	63
33	S	Washington Gas Light ..	40	2.00	5.0	2.65	10	Sept.	15.1	75	42
6	O	Western Kentucky Gas ..	15	.60	4.0	1.13	5	Sept.	13.3	53	38
		Averages			4.9%				14.7	72%	

RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER UTILITIES

1954 Rev. (Mill.)			*1/11/56 Price About*	*Dividend Rate*	*Approx. Yield*	*Share Earnings* Current Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Communications Companies									
		Bell System									
$4,784	S	Amer. T. & T. (Cons.) ..	181	$9.00	5.0%	$12.68**	7%	Aug.	14.3	71%	65%
220	A	Bell Tel. of Canada	50	2.00	4.0	2.43	5	Dec. '54	20.6	82	63
37	O	Cin. & Sub. Bell Tel.	90	4.50	5.0	5.16	26	Dec. '54	17.4	87	100
163	A	Mountain States T. & T.	127	6.60	5.2	8.56	24	Sept.	14.8	77	74
259	A	New England T. & T. ..	135	8.00	5.9	7.78	D6	June	17.4	103	64
632	S	Pacific Tel. & Tel.	136	7.00	5.1	9.93**	11	Nov.	13.7	70	58

81	O	So. New England Tel. ..	39	2.00	5.1	2.18	8	Dec. '54	17.9	92	60
		Averages			5.0%				16.6	83%	
		Independents									
2	O	Calif. Interstate Tel.	13¾	$ .70	5.2%	$ .77(f)	NC	Dec. '54	—	—	34%
11	O	Calif. Water & Tel.	19	1.00	5.3	1.34	14%	July	14.2	75%	36
12	O	Central Telephone	20	1.00	5.0	1.91	34	Sept.	10.5	52	23
2	O	Chenango & Unadilla Tel.	22	1.20	5.5	1.31	D34	June	16.8	92	48
35	O	Continental Tel.	30	1.00	3.3	1.79	37	Sept.	16.8	56	23
3	O	Florida Telephone	18	.80	4.4	1.07	40	Dec. '54	16.8	75	41
143	S	General Telephone	40	1.60	4.0	2.54	22	Oct.	15.7	63	34
5	O	Inter-Mountain Tel.	14	.80	5.7	.92	26	Dec. '54	15.2	86	54
17	S	Peninsular Tel.	40	1.80	4.5	2.28	15	Sept.	17.5	79	46
16	O	Rochester Tel.	18	1.00	5.6	1.63	47	Sept.	11.0	61	31
3	O	Southeastern Tel.	18	.90	5.0	1.36	43	Sept.	13.2	66	52
7	O	Southwestern States Tel.	19	1.12	5.9	1.31	18	June	14.5	86	34
24	O	United Utilities	22	1.20	5.5	1.60**	—	June	13.8	75	33
1	O	Western Carolina Tel. ..	15	.70	4.7	1.18	17	Dec.	12.7	59	52
10	O	West Coast Telephone ..	19	1.00	5.3	1.21	13	Sept.	15.7	83	42
222	S	Western Union Tel.	21	1.00	4.8	1.89**	12	Dec. '54	11.1	53	81
		Averages			5.0%				14.4	71%	
		Transit Companies									
13	O	Cincinnati Transit	5	$ .30	6.0%	$ .13	D86%	Dec. '54	—	231%	41%
9	O	Dallas Transit	7	.35	5.0	1.10	21	Dec. '54	6.4	32	71
227	S	Greyhound Corp.	15	1.00	6.7	1.40	19	Mar.	10.7	71	44
25	O	Los Angeles Transit	15	1.00	6.7	.99	D21	Dec. '54	15.2	99	87
29	S	Nat. City Lines	24	1.60	6.7	2.76	17	Dec. '54	8.7	58	75
26	S	N. Y. City Omnibus Corp.	28	2.00	7.1	2.71E	NA	June	10.3	74	85
13	O	Niagara Frontier Transit	9	.15	1.7	.09	D95	Dec. '54	—	167	82
73	O	Phila. Transit	16	.30	1.9	Deficit	—	Dec. '54	—	—	24
7	O	Rochester Transit	4½	.40	8.9	.44	D23	Dec. '54	10.2	91	38
25	O	St. Louis P. S.	14	1.40	10.0	.79	D35	Dec. '54	17.7	177	90
17	S	Twin City R. T.	17	1.60	9.4	Deficit	—	Dec. '54	—	—	43
23	O	United Transit	5	—	—	.53	D28	Dec. '54	9.4	—	44
		Averages			6.4%				11.1	111%	
		Water Companies									
		Holding Companies									
34	S	American Water Wks. ..	9	$ .50	5.6%	$ .95	8%	Sept.	9.5	53%	16%
4	O	N. Y. Water Service	65	.80	1.2	2.10	50	Sept.	—	38	32
		Operating Companies									
4	O	Bridgeport Hydraulic ...	30	$1.60	5.3%	$1.49	D5%	Dec. '54	20.1	107%	53%
11	O	Calif. Water Service ...	41	2.20	5.4	2.63	7	Nov.	15.6	84	29
2	O	Elizabethtown Water ...	158	5.00	3.2	6.34	D5	Dec. '54	—	79	—
8	S	Hackensack Water	42	2.00	4.8	3.26	D8	Dec. '54	12.9	—	40
5	O	Jamaica Water	37	1.80	4.9	2.93	4	Sept.	12.6	61	22
4	O	New Haven Water	59	3.00	5.1	4.42	76	Dec. '54	13.3	68	58
1	O	Ohio Water Service	24	1.50	6.3	1.94	4	Sept.	12.4	77	44
6	O	Phila. & Sub. Water	32	1.00(e)	3.1	2.45	—	Dec. '54	13.1	41	22
2	O	Plainfield Union Wt.	61	3.00	4.9	4.00	8	Dec. '54	15.3	75	—
3	O	San Jose Water	48	2.00	4.2	3.45	29	Nov.	13.9	58	—
9	O	Scranton-Springbrook ..	17	.90	5.3	1.31	D2	Sept.	13.0	69	35
4	O	Southern Calif. Water ..	14	.65	4.6	1.04	19	Sept.	13.4	62	—
3	O	West Va.-Water Serv. ..	31	1.40	4.5	1.31**	D7	Sept.	—	107	17
		Averages			4.7%				14.2	73%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. *Earnings are calculated on present number of shares outstanding, except as otherwise indicated. **On average shares. (a)—Paid 4 per cent dividend. (b)—Paid 10 per cent stock dividend. (c)—Paid 5 per cent stock dividend. (d)—Paid 25 per cent stock dividend. (f)—Nine months to December 31st. (g)—Estimated after eliminating nonrecurring items. (h)—Paid 25 per cent stock dividend. NC—Not comparable. NA—Not available. E—Estimated.

What Others Think

Regulation of the Natural Gas Producer— A Continuing Question

THERE is nothing ephemeral about the dispute within and without the natural gas industry on the question of federal regulation of the independent natural gas producer. It is likely to remain in the forefront whatever result the Senate is able to reach, after its consideration of bills, still pending at the time this is written, to exempt natural gas producers from the general jurisdiction of the Federal Power Commission.

The Harris and Fulbright bills, of course, are the product of long months of legislative proceedings, debate, and compromise. As such, they have not sprung full-blown from the minds of a few individuals or from any one group. They are marked by the contradictions and modifications brought about by the workings of the democratic process. This is one reason to believe that a regulatory question will remain, should the bills be enacted and signed by the President.

Another consideration is that at the high points of legislative controversy on an issue of long-standing importance, political crosscurrents on Capitol Hill tend to cloud over the facts going to the merits of the dispute. On these, reasonable men will still differ.

At such a time, and while waiting for results from the Senate, we have found it worth while to turn again to earlier statements on the subject made within the gas industry itself. They, perhaps more than any others, go to the heart of the matter, which is one of economic facts and philosophy, as well as a political issue. Among the latest of these, two, which we have chosen to review below, are notable for their broad perspectives and factual approach.

THE first is the report of the executive committee to the general membership of the Natural Gas and Oil Resources Committee, which clearly expresses the general viewpoint of the producer segment of the industry. The second, by Charles W. Smith, former chief of the bureau of accounts, finance, and rates of the Federal Power Commission, is a more detailed booklet, entitled "Prices and Pricing Practices of Producers of Natural Gas with Particular Reference to Their Effect on Consumers and Distributors," sponsored by the group of distributing companies known as the Council of Local Gas Companies.

The report to the producer group states at the outset that most of the predictable consequences of the federal government's efforts to regulate natural gas production are now evident. It says:

A reluctant, understaffed Federal Power Commission has failed to find a means of applying a realistic and equitable formula to the competitive production of natural gas. The commission's bewilderment and indecision are reflected throughout the industry. The incentive to explore and develop has largely been removed. And the threat of a drop in exploration for gas is now considerably more than a threat. . . . But what is far more important than the predictable, material consequences of regulation—important as they are—is the broad and general danger implicit in the new concept of federal controls which has developed since the Phillips decision of June 7, 1954. For these attempted controls are depriving a whole industry of the right to compete. And in doing so they pose a threat to a freedom which is vital to the entire American economy.

The Phillips Case involved only one producing company, yet the Supreme Court's 5-to-3 decision has been broadened to include 8,000 producers. There was no war or other national emergency to justify this sweeping application. There was no evidence of monopoly or price fixing to warrant such a step. Rather, there was abundant evidence to the contrary. Nevertheless, a paralyzing bureaucracy was imposed on one of the largest, least centralized, most vigorously competitive industries in the United States, in which the 743 largest producers supply only about 80 per cent of the gas (Bureau of Mines).

So now a precedent for the denial of the right to compete has been established. If that denial stands and the precedent is accepted, then any, many, or all American businesses are in danger of losing a freedom which is as indispensable to our unwritten economic constitution as the right of free speech is to our written political constitution.

THE basic alternative to competition, according to the report, is state socialism, or nationalization of industry and business. It suggests that when the natural gas production industry finds itself inhibited and encumbered by government price fixing and partial government management, it is not possible to say that the national economy is safe from a socialistic trend.

Unfortunately for the producer, the report declares, some people have been led to believe that controls will work effectively to assure the public an abundant supply of gas at low prices.

It continues:

> . . . They may even believe the absurd but persistent threat by the proponents of regulation that, if the producers were decontrolled, residential gas prices would increase $800,000,000 a year.
>
> To accomplish this predatory feat the producers would have to increase their present share in the nation's residential gas bill—and it amounts to only about a dime of the consumer's dollar—by more than *400 per cent.* If they would do this—which of course they would not—they would certainly price gas out of the fuel market in most sections of the country.

What the report calls the bewilderment and indecision of the FPC in face of its regulatory chore arise from the difficulty of imposing upon the competitive production of a commodity that rate base formula which was designed for public utility services. It quotes the recent statement made by FPC Chairman Kuykendall before the convention of the National Association of Railroad and Utilities Commissioners to that effect.

LONG-DISTANCE DIRECT DIALING

CHAIRMAN Kuykendall remarked at that time that in one case the commission had been confronted with the task of fixing, for rate-making purposes, a price for natural gas produced and sold by a pipeline company. It found the following:

> . . . The price derived by use of the original cost rate base method would have been 85/100 of one cent per Mcf . . . When adjustments were made to that figure for the statutory depletion allowance and for credits for extraction operations, in order to make a legitimate comparison with independent producers' prices, the price per Mcf was a negative figure; namely, minus 1.24 cents per Mcf.

On the other hand, there are cases where producers have spent sums out of all proportion to the quantity of gas reserves which they have developed. If they were to receive a fair return on their investment, the price for their gas would have to be many times greater than the amount anybody would pay for it. Obviously, a regulatory body could not and should not fix a rate

which would deprive a producer of any sales and any revenue whatsoever.

The FPC chairman further stated that the use of a fair value rate base would amount only to a roundabout way of arriving at the current value market price of the gas—in effect an unregulated price. He stressed the dangers implicit in embarking on any regulatory program, "so cumbersome, so expensive, so indifferent to basic economic laws, or so inequitable in some cases," that it brings about a breakdown and loss of respect for the regulatory process, and thereby induces Socialism as the only apparent alternative.

To these words, the report adds the observation that the regulatory job ought to be to deal with services, not commodities, and to assure the benefits of competition — good services and fair prices—in situations where competition does not exist.

What exactly has regulation done to the producer? The report answers this question as follows:

> . . . First of all, it has given him an unaccustomed load of time- and money-consuming paper work in the various documents which he must submit to the FPC. He may be subjected to a long, and again money-consuming, delay in getting an FPC decision on a contract with a pipeline. And, especially if he is one of the smaller producers, he is finding it harder to get money to continue his highly expensive and risky operations.
>
> Bankers, with good reason, are being cautious and conservative in lending money for the development of gas discoveries. Such loans demand sound collateral in the form of a sound contract for sale of the gas once the development is completed. And a contract which the FPC may alter or cancel at any time scarcely meets the requirements of soundness.
>
> The imposition of controls on producers is too recent to allow many airtight assertions. But some figures are becoming available, and they are beginning to speak for themselves.
>
> The last full year in which producers were free of regulation was 1953. In that year 11.7 *trillion* cubic feet were added to the country's proved, recoverable natural gas reserves. In 1954, the new additions totaled only 263.6 *billion* cubic feet. That is a drop of more than 98 per cent in one year! . . .
>
> Figures on gas well developments currently available for 1955 cover only the first seven months. But they show a decrease of 12 per cent over the corresponding period last year. And new gas wells brought in through exploratory drilling, as of November 20th this year [1955], are 14 per cent fewer than in 1954 at the same date.

The report also takes note of some statistics of possible significance in the pipeline field. In the year ending June 30, 1955, authorized certificates for new pipeline construction were nearly 25 per cent fewer than those of the previous year. The gas transmission industry's market is capable of great potential expansion. But the pipeline companies must look beyond the present gas supplies committed to them for new supplies for future markets, the report states, before they undertake the enormously expensive job of extending their transmission systems. Under present conditions, which the report likens to a "chain reaction of uncertainty," thousands of families who want gas and have been waiting for it will have to keep on waiting.

While the figures quoted, in the viewpoint of the writers of the report, cannot

be called conclusive, they almost certainly indicate that the search for gas is being de-emphasized. So long as the gas regulation issue continues in its present turbulent state, the writers feel it is safe to say that most producers are concentrating on drilling projects which give the brightest prospects of producing oil. It is also likely, they insist, that some new gas discoveries will not be marketed, but will be shut in and retained, awaiting future developments.

On this point, the report states:

> It is entirely proper that producers should take this course. They have no moral obligation to search for gas rather than oil. They have no moral or legal obligation to sell gas for interstate transmission, beyond the terms of present contracts. It is easy enough for a producer to go bankrupt in the oil and gas industry without deliberately courting the artificial hazards of bureaucracy.

The report concludes that the regulation of the present, if continued indefinitely, will shorten supply. That inevitably will raise, not lower, prices. But, even that will seem a minor matter, the report asserts, even though it involves an investment of billions by the industry and its customers—compared to the shadow of this precedent of regulation which falls across the whole area of the American economy.

THE pamphlet, written by Mr. Smith for the distributor companies joined in the Council of Local Gas Companies, takes a totally different and opposing view. It seeks to demonstrate that the passage by Congress of the Harris and Fulbright bills, eliminating federal control of the prices of natural gas at the wellhead, would work severe financial hardship on the consumer, as well as on the pipeline companies and distributors who bring gas from the wells to the customer.

Mr. Smith states that in 1938, when the Natural Gas Act was passed, the industry had one-third the number of customers it had in 1954; and only 28 per cent of marketed production moved in interstate commerce. Yet Congress found its regulation "necessary in the public interest."

Thanks to two factors—namely, the comparative price advantage enjoyed by natural gas over competitive fuels and the administration of the Natural Gas Act by the FPC—pipelines have grown 64,000 miles in length, to the tune of a total investment of over $4.8 billion. Mr. Smith believes that the Natural Gas Act was responsible for the boom in the sense that it assured just and reasonable interstate prices to distribution companies, and assured an adequate supply of gas for specific projects.

EXTENSIVE filings for increases in pipeline rates began in 1950, the former FPC official declares. He adds:

> The predominant cause of the increases in pipeline company rates is beyond question the increased cost of gas purchased in the producing fields together with claims for similar allowances for gas produced by the pipeline companies. A study of the staff of the Federal Power Commission in 1954 . . . indicated that some 84 per cent of the pipeline increases were due to higher costs of purchased gas . . . . Thus in the largest of the rate increases filed by pipeline companies, that of Texas Eastern Transmission Corporation in 1952 for $41,000,000 (of which about $33,000,000 was allowed), it was stated that the cost of gas had increased $26,-

000,000 or 50 per cent on an Mcf basis in two years.

The filing of Tennessee Gas Transmission Company in November, 1954, for an annual increase of $8,816,000 lays the entire increase to increases in prices by producers.

The filing by United Gas Pipe Line Company in September, 1955, for an increase of $8,838,000 is interesting in this connection in that it shows the claimed increase in the cost of gas in the field, $13,413,251, would exceed its entire net income of $13,402,546 for the test year ended April 30, 1955.

The foregoing are not isolated illustrations, but, rather, the examples are altogether representative. Increases in the price of gas in the southwest producing areas are almost entirely responsible for the substantial increases obtained by pipeline companies in recent years. It is noteworthy that seven states in the Southwest produced about 86 per cent of all the natural gas produced in this country in 1953. Unfortunately, all the evidence points to further, and substantial, increases in field prices, unless the increases are effectively restrained by federal regulation.

WHAT has happened since the U. S. Supreme Court ruled that FPC had jurisdiction over producer sales to interstate pipelines? Mr. Smith states that the producers up to June 30, 1955, filed for rate increases aggregating $30,888,000. From July 1, 1955, to December 15, 1955, the increases sought by them amounted to $17,658,000. Pipeline companies filed for increases which were suspended in the amount of $16,519,400 during the period January 1, 1955, to the last date for which information is available, December 15, 1955. This represents a low figure in comparison with other recent years, the public utility consultant points out. He suggests that producers may have been somewhat cautious in seeking increases while the Congress has been considering bills designed to curtail the jurisdiction of the commission. But in any event, he says, the facts show that the Supreme Court's decision has had the effect of slowing down the filings for rate increases to distributors in the last year or so.

The writer then goes on to say:

> When the Natural Gas Act was passed in 1938, the cost of gas purchased by pipelines in the southwest producing areas was about 4 cents per Mcf. This, the writer believes, was a compensatory and not a distressed rate. The basis for this conclusion is the writer's experience in determining the cost of gas produced in the same areas at about the same time by pipeline producers. The cost of production to the pipeline companies was considerably less than the cost of gas purchased from others, thus allowing for a good margin of profit in the approximate 4-cent rate. True there was distress among some producers of natural gas, but this was in areas where there were no pipeline outlets and much of the gas could not be marketed.

BEGINNING with the boom in pipeline construction, the price of gas in the southwest producing fields started to climb, from 5.3 cents per Mcf in 1946 to 9.2 cents in 1953, according to Bureau of Mines averages. But these, the writer insists, do not clearly indicate another fact —that the rates paid by pipelines to the producers in new contracts have been far above the national averages. Pipeline transmission systems, in the years since 1953, have consistently paid higher prices. Mr. Smith cites examples of recent 20-year purchase contracts between produc-

"WELL, I'VE GOTTA GET ON DOWN TO MY JOB AT THE BANK. CALL ME IF YOU NEED ME!"

ers and pipeline companies providing for periodic increases, tax reimbursements, and escalator clauses which he believes will bring the terminal price to as much as 28.5 cents per Mcf, making "30-cent gas" a distinct possibility in the foreseeable future.

According to the former FPC official, three types of escalator clauses found in most producer contracts have had significant effect on price levels. Renegotiation or redetermination clauses call for renegotiating the price at stated intervals, often on the basis of the average of the three highest prices paid by pipelines in the area under similar conditions. Two-party favored nation clauses provide that if the buyer pays another producer a higher price for gas produced in the same district, he will increase the price paid under the contract by a sum equal to the difference. Third-party favored nation clauses, the third type, provide that the contract price shall be increased to the amount paid by other purchasers for similar gas in the same area.

Mr. Smith describes the effect of such clauses in the following words:

. . . the price structure is such that

prices in the producing areas gravitate to the highest. The distributors of natural gas are caught in a maelstrom by such producer price mechanisms. Distributors are obligated to serve the the needs of their service areas. As the population increases and the service areas grow, more gas is required to render adequate service. Ironically, the purchase of additional gas by a distributor not only results in a higher price for the additional quantity, but often springs the escalatory trigger which increases the price of all the gas it buys and, frequently, gas which other distributors buy as well.

THE writer is equally critical of state laws, such as exist in Kansas and Oklahoma, setting minimum prices for gas sold at the wellhead, much of which moves thereafter into interstate transmission systems. In this way these states control to a substantial degree the prices of natural gas which moves in interstate commerce, what the writer feels is a "constitutional incongruity," in view of the commerce clause in the Constitution of the United States.

He further states:

> Such minimum price laws, it should be noted, are not patterned after public utility regulatory statutes which are aimed at obtaining just and reasonable rates, or of fixing maximum rates, but are directed towards increasing rates through the fixing of the minimum price which may be charged. They are thus opposed to the basic principle of rate regulation. They are aimed at forcing the prices in one direction only—upward.

Since the boom in pipeline construction, Mr. Smith notes, a seller's market for gas has prevailed in the southwest producing fields. The only real competition he finds is among purchasers who seek adequate supplies of gas to meet the needs of ultimate consumers. He maintains that it is largely by virtue of this seller's market and the relatively small number of large producers which seem to dominate it that the unsound price structure, as he describes it, has been fashioned. FPC statistics cited show that nine producers, and persons associated with them, sold 37½ per cent of the gas purchased from producers by pipeline companies in 1954; the next sixteen sold 20.6 per cent; the next eighteen 11.9 per cent. Thus 43 producers, it is said, sold 70 per cent of the gas purchased in the field by interstate pipeline companies in 1954.

ANOTHER complicating factor, and a distinguishing characteristic of the business, is that gas cannot be freely marketed in the various ways many other commodities are sold, the writer states. Pipelines cannot be moved from one location to another. Investments in both transmission and distribution facilities are permanently dedicated. The public utility consultant feels that this investment is in jeopardy so long as there is no contractual assurance as to price, and that this can be attained only if the price is effectively regulated. He asks: How else can the Federal Power Commission "assure the maintenance of just and reasonable prices at the end of the transmission line, where the distributors take the gas, if it has no effective regulatory authority at the point where the gas enters the line?"

Another point, the author makes, is that if prices continue to rise, the pipelines will lose their industrial market, which is highly competitive, and without such sales, to distribute the seasonal load factor more evenly and help carry the

cost of pipeline operation, the price to residential and commercial consumers might have to be pushed upward as much as 100 per cent.

IN short, Mr. Smith finds it is reasonable to conclude that the potential increase in the price of natural gas over the next few years is to be measured in billions of dollars unless effective continuing federal regulation of producer prices can halt a present inflationary spiral. He opposes the "reasonable market price" standard, as contained in the Harris and Fulbright bills, because in his view such a guiding principle would *ipso facto* legalize all prices in contracts entered into at arm's length between willing buyers and willing sellers, and leave the regulator with no effective means of control of prices at places where natural gas enters interstate commerce.

Oklahoma Commission Rules on Accelerated Depreciation

AN important order to the utility industry as a whole, and one which has received comparatively little attention, was issued on June 29, 1955, by the corporation commission of Oklahoma. This order, which became a modification of earlier rate orders involving rates and charges of the Oklahoma Natural Gas Company, is significant because it is the first commission order which ruled specifically on the rate-making aspects of liberalized depreciation.

The earlier rate orders which permitted the company to increase natural gas rates specified that "The company should accrue annual depreciation on its books in conformity with amounts allowed for federal income tax computation."

However, since this order was made prior to the enactment of the liberalized tax depreciation provisions of the 1954 Internal Revenue Code, the company asked the commission to modify the above order since, under § 167 of the code, taxes are reduced during the earlier years of the life of the property being depreciated and increased during the later years of the property's remaining life. The problem which the commission faced was the reconciliation of its prior order which required actual taxes to be used in computing the cost of service with *a normalization* of taxes and the consequent benefits arising therefrom under the provisions of § 167 of the Internal Revenue Code.

The commission, after noting that "The depreciation applied to the public utility properties of the company subject to depreciation allowance in connection with the federal income tax computation at the time these orders were entered was on a straight-line basis and at a rate of 3.3 per cent," went on to say "That sound public utility accounting practices substantiate the request of Oklahoma Natural Gas Company as set forth in its application."

THE order issued by the corporation commission is a most thoughtful document and may well suggest ideas to other commissions contemplating the issuance of rate orders with respect to the treatment of liberalized depreciation. The commission's order said in part:

"The company shall continue to accrue depreciation on its books in conformity with procedures in effect immediately prior to this order established by the company under Order No. 25558 and continued in effect under Order No. 27476 on properties subject to depreciation allowance which were constructed prior to January 1, 1954, and on properties construct-

ed thereafter to which accelerated depreciation or amortization of emergency facilities is not applied. The company shall provide on its books of account and for rate base and rate determination purposes for depreciation on properties as to which accelerated depreciation or amortization of emergency facilities is used for income tax purposes at rates consistent with those for like properties to which accelerated depreciation or amortization of emergency facilities is not applicable (the total of which depreciation is hereinafter referred to as 'normal depreciation') in the following manner, viz:

"(a) The public utility rate base of the company will be decreased annually by the amount of normal depreciation on public utility property including the public utility property on which the accelerated depreciation or amortization of emergency facilities is used for federal income tax computation purposes.

"(b) The expense deductions for depreciation on public utility property in rate determination matters shall be based on normal depreciation for all depreciable public utility property, including the public utility property on which accelerated depreciation or amortization of emergency facilities has been taken for federal income purposes.

"(c) The federal income tax computation shall be made for rate-making purposes, using normal depreciation as to all depreciable public utilities on which accelerated depreciation or amortization of emergency facilities has been taken for federal income tax purposes.

"(d) The earnings of the company for rate determination purposes (rate base and rate making) shall be computed on the basis of normal depreciation and any tax savings effected by the application of accelerated depreciation or amortization of emergency facilities shall not be included in such rate determination computations. *Any such savings may be treated as income on the books of account of the company or placed in reserve, or may be partly treated as income and partly placed in reserve in such amounts and proportions and at such times as may be determined by the management of the company to be good business practice.* (Italics supplied.)

"It is further ordered that the company be required to keep memoranda balance sheet accounts for both the investment subject to accelerated depreciation and the depreciation reserve applicable to such investment; that under no circumstances will the amount of accelerated depreciation be included in operating expenses or in reducing the rate base.

"It is further ordered that in making its annual report to this commission the company will earmark Unappropriated Earned Surplus Account on the balance sheet and on the following page will show the saving in this account at the end of the first year and at the close of each succeeding year for which a report is submitted due to the adoption of the depreciation provisions of § 167 of the Internal Revenue Code of 1954. The company will also, under the income statement, earmark federal income taxes and on the following page, under appropriate note, explain the amount of saving in federal income taxes due to the adoption of the depreciation provisions of said § 167."

It is of interest to note that on July 18, 1955, the Oklahoma commission issued an order with respect to the Public Service Company of Oklahoma but restricted it to accounting purposes only — saying that "This order shall not be construed as an adjudication of any issue which may arise in any future rate proceeding."

With respect to electric utilities, as of this date, fourteen commissions have is-

sued eighteen orders. Of these orders, nine prescribed a restricted or appropriated surplus method of accounting, seven prescribed the tax reserve method, and two were denials of application.

Of special interest along this line was the recent opinion of the Ohio Public Utilities Commission in the Cleveland Electric Illuminating Case, modifying a temporary order of last September. The Ohio commission, in its subsequent order, directed the Cleveland utility to account on its books for that portion of its properties which are subject to an accelerated depreciation (pursuant to election under § 167) in the same manner as its other properties—and to accrue depreciation for the same—at rates consistent with rates for other property not subject to accelerated depreciation.

The recent Ohio commission order further provides that during the service life of any of its properties—with respect to which the utility has elected accelerated depreciation, and where a net difference in future taxes in any year results—such difference should be charged or credited to provisions for future federal income taxes. Correspondingly, the company would also credit (or charge) the net difference to a reserve account for future federal income taxes.

—C. P. Guercken.

Notes on Recent Publications

A biographical sketch of one of the nation's great natural resources—*"Tungsten, the Story of an Indispensable Metal"*—gives an alive and glowing personality to a cold hard metal. Tungsten is a fascinating and curious substance and has quality characteristics not equaled by those of any other metal. Its greatest virtue is that quality that makes it indispensable in today's world — its ability to retain its strength at high temperatures. Tungsten has the highest melting point of any metal known to man — 6,152° Fahrenheit. In hardness tungsten carbide is second only to the diamond. The addition of tungsten materially increases the hardness and heat resistance of steel at high temperatures and this quality is called hot hardness or red hardness, and that puts tungsten metal into a category all its own.

The story of tungsten involves some fairly brave personalities; noteworthy discoveries; invisible light, and sounds beyond the range of the human ear; wars won and the course of history altered; modern mass production and destruction; and comforts for our daily lives far beyond the dreams of our forebears. How little we actually know of the part played by tungsten in modern times in all electronic devices and developments, in jet power plants, and in everything symbolic of the atomic age is brought home to us with terrific impact after just a few minutes spent with this booklet.

It is not a scientific paper, nor is it a promotional piece of literature, but it is boiled down essence of facts told in an absorbingly interesting manner concerning an indispensable commodity produced in abundance in this country.

To prepare such a practical and informative digest requires a certain amount of knowledge of the subject. This background the author has shown, her interest in strategic metals dating from World War II when she was a member of War Production Board's committee on industrial salvage.

This story is designed for the general public, for schools, colleges, and for any quick reference shelf.

Tungsten, the Story of an Indispensable Metal, by Mildred Gwin Andrews, 28 pp. Illustrated. December, 1955. The Tungsten Institute, Washington, D. C. Price $1.50.

The March of Events

FPC Hearing on Gas Imports Set

THE Federal Power Commission has scheduled consolidated hearings to commence February 14th on applications by Midwestern Gas Transmission Company and Tennessee Gas Transmission Company, both of Houston, Texas, involving the proposed import and export of natural gas from and to Canada.

Midwestern is proposing to build a $97,988,000 pipeline project extending from a connection with Tennessee's system near Portland, Tennessee, to a point on the U. S.-Canadian border where it would receive 204,000,000 cubic feet of natural gas per day from Trans-Canada Pipe Lines, Ltd., near Emerson, Manitoba.

Tennessee is also proposing to sell up to 86,755,000 cubic feet of gas daily to Trans-Canada near Niagara Falls, New York, for export to the Montreal, Canada, area.

Committee Approves Niagara Bill

THE Senate Public Works Committee recently approved, 6 to 2, a bill that would authorize New York state to build and operate an electrical power project at Niagara Falls. By the same vote, the committee rejected a bill of Senator Homer E. Capehart (Republican, Indiana) that would allow private utility companies to develop the hydroelectric project on the U. S. side of the Niagara river at the falls.

Senator Herbert H. Lehman (Democrat, New York) was joined by fifteen other Democratic Senators and one Republican, Senator William Langer (Republican, North Dakota), in sponsoring the public power development bill which the committee approved.

Committee Chairman Dennis Chavez (Democrat, New Mexico) said he hoped to get the legislation to the Senate floor "very soon." He predicted the Senate would approve it.

Lehman later said he was confident the Senate would approve the bill. He also predicted the Senate would accept two changes which he and Governor Harriman of New York had agreed upon since the bill was introduced.

AGA to Sponsor Legal Symposium

THE American Gas Association will sponsor a legal symposium covering various phases of the natural gas legislation now before Congress. The symposium will be held at the Waldorf Astoria hotel in New York city on April 9th, 10th, and 11th.

Discussions on the first day will cover a broad outline of legislation presently

before Congress. Procedural aspects of the Harris-Fulbright bills from the viewpoints of producer, pipeline, and distributing company will be analyzed. Another topic at the first meeting will be the impact of these bills on contract prices.

The second session will be devoted to determination of a "reasonable market price" for gas and to summarizing alternate proposals, constitutional problems, and defects in the present Harris-Fulbright bills.

The third day of the symposium will be devoted to explanations and interpretations of recent judicial decisions on cases involving the Natural Gas Act. This discussion also will include other problems pertaining to distribution, underground storage, and other operational topics.

Alabama

Hydroelectric Project Planned

THE Federal Power Commission announced recently that Alabama Power Company, Birmingham, had filed a license application for a proposed $109,155,000 hydroelectric project on the Coosa river in Alabama and Georgia.

The project would consist of four new water-power installations and redevelopment of an existing dam. An initial 360,800-kilowatt capacity is planned.

The FPC previously issued Alabama a preliminary permit for the project so the company could make surveys and investigations necessary to prepare its license application.

Illinois

Gas Firm Sues over City Tax

CHICAGO'S new utility taxes effective January 1st were challenged in a suit filed last month in circuit court by the Peoples Gas Light & Coke Company. Both temporary and permanent injunctions to restrain collection of the taxes were asked.

The three ordinances, enacted by the city council on December 1st as authorized by the 1955 state legislature, levied gross receipts taxes of 5 per cent on Peoples Gas, 2 per cent on Illinois Bell Telephone Company, and 1 per cent on Commonwealth Edison Company. The telephone and electric utilities already were paying franchise taxes of 3 and 4 per cent, respectively, on their gross receipts in Chicago.

The tax on Peoples Gas, according to the suit, would increase gas bills for about 1,000,000 customers by a total of 5.6 per cent. The additional .6 of 1 per cent includes collection expense, additional state utility taxes, and added miscellaneous expenses.

The suit contended the taxes violate the Illinois Constitution and state cities and villages act because they are nonuniform and discriminatory. The company's other principal allegation is that the tax exacts compensation from the gas company for use of city streets in violation of its 1855 state charter.

Edison Agrees to Buy Power System

COMMONWEALTH EDISON COMPANY last month agreed to purchase the power transmission and distribution facilities of Produce Terminal Corporation for cash and stock totaling approximately $4,800,000. Produce Terminal supplies

electricity to some 300 customers in the stockyards area and in the Central Manufacturing district.

The agreement, announced by Willis Gale, Edison chairman, and James F. Donovan, trustee of the Central Manufacturing district and vice president of Produce Terminal, is subject to approval by the state commerce commission.

Edison's standard Chicago rate schedules will be applied to the customers served by Produce Terminal, officials of the utility said. In most cases the rates are similar to those the customers now pay.

Kentucky

Suggests City Buy Utility

A PROPOSAL that the city of Louisville acquire and operate the Louisville Gas & Electric Company, as an alternative to raising its one per cent occupational tax, was made recently by Sam Ezelle, secretary-treasurer of the Kentucky Federation of Labor. The utility is now a privately owned stock corporation.

In 1945, a citizens' group headed by former Mayor Wilson W. Wyatt advocated city purchase of the utility, but no action resulted.

Missouri

Fire Districts Seek Right to Tax Utilities

ST. LOUIS county fire protection districts, which stand to lose $40,000 to $50,000 annually in revenue from public utilities and railroads as a result of a recent state supreme court decision, voted last month to seek Governor Phil M. Donnelly's help in revising tax laws.

Governor Donnelly, who had announced that he would call a special session of the state legislature if voters approve a $75,000,000 bond issue at a special election on January 24th, would be asked to include in his call, so that legislators may give it immediate consideration, the question of special taxation for fire districts.

Public utilities and railroads in the St. Louis area have withheld payment of special taxes for fire, water, and sewer districts because the state supreme court ruled last September that such levies were unauthorized in a case involving property of the Kansas City Power & Light Company.

In addition to seeking legislative relief, fire protection districts were urged by the attorney for the West Overland district to bring an action in circuit court at Clayton against utilities and railroads that have withheld tax payments. He doubted that the prospective special session of the legislature could take action because of pressure of other work. It might be three years, he argued, before the law was repaired, and meanwhile the revenue would be lost.

Nebraska

Power Addition OK'd

A $16,500,000 addition to the Omaha Public Power District's massive North Omaha power station has been authorized by OPPD directors, it was announced last month. The new 100,000-kilowatt generating unit is to be completed by May, 1959. A similar unit is now under construction and is expected to be completed by May, 1957.

Upon completion of the two units, OPPD's total operating capacity will be boosted by 69 per cent to a total of 490,000 kilowatts. Present capacity is 290,000 kilowatts.

Cost of the new addition, including the structure housing it and the substation, will be $15,500,000 and the river intake will cost an additional million dollars.

Directors pointed out that any capacity of the new unit load immediately required by OPPD will be available for sale to interconnected utilities for a limited period of time.

The new generating unit will be a conventional fuel-burning power plant. Atomic power for the needed additional OPPD generating capacity was ruled out for several reasons.

New Jersey

Commissioner Appointed

GOVERNOR Robert B. Meyner recently appointed Deputy Attorney General Ralph L. Fusco, of Metuchen, to be a member of the state public utility commission.

Mr. Fusco, who has been acting prosecutor of Passaic county for the last year, was named to succeed Mrs. Hortense F. Kessler, of Orange, who resigned to return to private law practice in Newark.

Oklahoma

Gas Rate Increase Approved

THE state corporation commission last month approved an increase in rates for Oklahoma customers of Consolidated Gas Utilities Corporation.

The new rates, amounting to an increase of some $402,000 a year, went into effect January 5th, Richard W. Camp, Consolidated Gas president, said. The company had asked for an annual increase of $417,000 in July, 1955.

The increased rates apply to all Consolidated customers in Oklahoma, Mr. Camp explained, with the maximum increase for any one consumer 85 cents a month. Users will pay 25 cents more for the first thousand cubic feet, 18 cents more for the next two thousand, and 6 cents per thousand over previous rates for the next seven thousand cubic feet.

Mr. Camp said the increase allows a 6 per cent rate of return on a depreciated original cost rate base.

Rhode Island

Utility Rate Probe Proposed

A RESOLUTION proposing an investigation of Rhode Island gas, electric, telephone, and water rates was introduced in the state legislature last month by Senator Lewis, Warwick Republican.

Lewis, who unsuccessfully sponsored a similar measure last year, said that Rhode Island gas and electric rates are about the highest in the country. Low gas pressure in sections of Warwick during a recent cold spell, he further declared, created a hazard both to the safety and health of gas customers.

His proposal calls for an investigation by an engineer appointed by the governor and an accountant named by the lieutenant governor. An appropriation of $15,000 would be made to pay the investigators, who would have authority to demand attendance of witnesses and to call in records.

They would report to the legislature later in its current session.

Public Representative Asked

A RECOMMENDATION for the creation of position of public counselor, to rep-

resent the ratepayer in public utility rate cases, was revived by Governor Roberts in his annual message to the state legislature early last month.

The governor said the number of rate cases in recent years, "and the ever-present possibility of further requests for rate increases," made it essential that a rate case be recognized for what it is; namely, "an adversary proceeding in which the public has an immediate stake. While the division of public utilities presently carries the burden of evaluating rate applications, and passing upon them, its work would be immeasurably aided if the rate cases of the public utilities were subjected to examination and cross-examination by the public counselor."

Similar proposals have been rejected at past sessions of the state legislature.

Virginia

Would Accelerate Taxes

GOVERNOR Stanley, in his message to the state legislature last month, asked that the deadline for paying state taxes on individual and fiduciary income, together with taxes on public utility corporations, be moved forward several months to produce what he described as an initial "one-short windfall" of about $48,500,000 to help start a state building program.

During the first year of its operation, such a tax program would require two tax payments within a single 12-month period. Thereafter, the income taxes would be payable each year on April 15th instead of December 5th and the public service corporation tax deadline would be June 1st instead of October 1st.

Repeal of the state's automatic tax reduction act also was recommended by the governor, who said the effectiveness of the tax acceleration plan was dependent on such action. State Senator Harry F. Byrd, Jr., author of the act, had earlier said he would have no objection to its repeal.

The unique Virginia tax reduction or credit act provides for automatic state income tax reductions whenever the state general fund total revenues for a given year exceed the governor's budget estimate by a specified minimum amount.

Washington

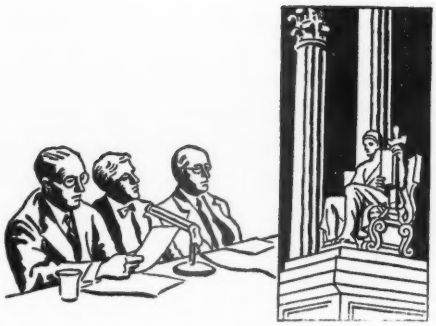
PUD Purchase of Dam Approved

FEDERAL court approval was given in Pasco last month to Chelan County Public Utility District purchase of the Puget Sound Power & Light Company's Rock Island dam project on the Columbia river. At the same time, the district and the company announced two long-term power agreements which, in effect, make them production partners.

Under one agreement, the Puget Sound Company will join in financing the proposed Rocky Reach dam upstream from Rock Island. It is a $200,000,000 to $250,000,000 venture. The company, in return, will get about half the power from it.

The other agreement provides for the firm to get about half the power from Rock Island. The latter, built about twenty-five years ago, was the first power dam on the Columbia.

United States District Judge Sam Driver approved the agreement under which the PUD will pay $28,276,200 for the dam and power facilities. The action marked a negotiated windup to court condemnation proceedings which the district instituted against the power firm's properties several years ago.



Progress of Regulation

Trends and Topics

Return Related to Rate Base Theory

A PERCENTAGE figure applied to the number of dollars found to represent the rate base of a public utility produces the number of dollars to be allowed for return. Comparisons of such percentage figures, however, may be misleading if the method of rate base determination is overlooked. The net income to the public utility company must meet the standards established by courts and commissions involving such factors as attraction of capital, cost of money, risk, and comparable returns.

The interrelationship of rate of return and rate base is discussed in *"Rate of Return,"* by Ellsworth Nichols, at page 408, published by Public Utilities Reports, Inc. The obvious fact is noted that a utility would rather earn 6 per cent of $90,000,000 than 5 per cent of $100,000,000. Commissioner Catterall of the Virginia commission, in the Chesapeake & Potomac Telephone Company Case (85 PUR NS 435, 495), observed that the financial interest of stockholders "is not in the rate base or the rate of return as such, but in the product of the two figures."

The Supreme Court, in the Hope Case (51 PUR NS 193), recognized the relationship between earnings and rate base when it said that rates could not be made to depend upon "fair value" when the value of the going enterprise depends on earnings under whatever rates may be anticipated. The question was said to be whether a rate order viewed in its entirety meets the requirements of the regulatory act. The statutory standard was said to govern the result reached and not the method employed.

Rate of Return on Reproduction Cost

The possible variation in percentage allowances for return as applied to different kinds of rate bases is illustrated in recent decisions by the Ohio commission in the Ohio Fuel Company Case and the Ohio Water Service Company Case (reviewed in PUBLIC UTILITIES FORTNIGHTLY, January 5, 1956, at page 68). The commission based natural gas rates on a rate of return of 3.42 per cent applied to a rate base measured by reproduction cost. A return of 3.39 per

cent was allowed on the rate base of the water company determined by the same method. The over-all percentage return of 3.42 per cent, according to the commission, would provide for servicing debt and allow earnings of 9.99 per cent on equity capital of the gas company. The return of 3.39 per cent would provide earnings of 13.48 per cent on the equity of the water company.

Variation in Return Percentages

An examination of decisions on rate of return allowances discloses the fact that the realities of this situation have not been ignored. For example, the Nebraska commission, in the Lincoln Telephone & Telegraph Company Case (71 PUR NS 129), established rates on a scale calculated to produce rates of return ranging from 3.15 per cent on a reproduction cost rate base to 6.49 per cent on a cost rate base, with intermediate percentage figures on other bases considered. In the Mountain States Telephone & Telegraph Company Case (89 PUR NS 341), the Wyoming commission authorized an increase in rates which would yield a return between a low of 5.23 per cent on a present value rate base and a high of 7.50 per cent on an original cost rate base.

The Maine commission, in the Central Maine Power Company Case (7 PUR3d 15), said that a rate of return should vary depending upon the weight given in the rate base to original cost and current value factors. A return of 5.8 per cent was allowed on a rate base determined after consideration of current value and other factors.

The Kentucky court of appeals, in the Citizens Telephone Company Case (94 PUR NS 383, 386), rejected an argument that where the commission had allowed a 6 per cent return on an original cost rate base, a higher rate base with a 6 per cent rate of return would have supported the full rate increase sought. The court declared that the fallacy in the argument was that it assumed the rate of return should remain the same regardless of the method or formula used in determining the rate base.

The Michigan commission, however, in a Michigan Bell Telephone Company Case (5 PUR3d 301, 308), criticized a disregard of the facts relating to the rate base. Rejecting contentions for the consideration of various controversial rate base elements, the commission said there was no justification "for beguiling the public by adopting a low relative rate of return and relating it to an unreal, speculative, mythical, and excessive rate base."

Implications of Capital Cost Element

Allowance of a small rate of return on a fair value, or reproduction cost, rate base because of the weight given to cost of capital, discussed in the Ohio cases mentioned above, raises several interesting questions: What capital costs should be considered—current or historical? If historical cost of capital is given weight, what happens to the theory in "fair value" states that public utility property values and rates should rise and fall during different economic eras, like those of unregulated business? Is this a move towards a rate base measured by capitalization—a return basis consistently disapproved for many years?

Review of Current Cases

Interim Telephone Rate Increase Granted and Opposition Testimony Criticized

THE New York commission granted the New York Telephone Company a temporary rate increase calculated to yield a return of 6 per cent pending appeal to the New York court of appeals from a court decision reversing the commission's denial of a $68,850,000 rate increase (8 PUR3d 229). The interim increase of $8,052,000 was to be made up largely by schedule adjustments. Simultaneously the commission dismissed New York city's petition for a rate reduction.

The additional revenues were to be obtained from higher rates for extension of private branch exchange and private line stations, private branch exchange and order equipment, and upgrading of service in exchanges which have grown to the extent that they have moved into a higher rate bracket. Hotels were also allowed to charge an extra penny on outgoing local calls in recognition of the fact that general increases in price levels have occurred in recent years and further increased costs to the hotels will result from the present decision.

Rate Base

The commission used an original cost rate base, since the company's claim for higher rates was based on the findings of the previous denial order of the commission (5 PUR3d 33), which likewise used such a base. No allowance was made for working capital. The company's claim for working capital was made up entirely of the cost of materials and supplies on hand. It argued that since materials and supplies represent physical property, they must be included in the rate base even if fully offset by current liabilities. The commission's rejection of this claim was based upon a study of working capital requirements, indicating that moneys advanced by ratepayers exceeded the working asset requirements, including materials and supplies.

The commission also said it would not tolerate the use of a fallacious year-end rate base method, however popular it seems to have become elsewhere. Another computation involved an entire twelve months already elapsed at the beginning of these hearings and would purport to compensate for a deficiency of earnings in that past period. The commission also rejected this exhibit as incompetent.

Cost of Money

No cost-of-capital study was presented by the company. This was not considered objectionable, however, since the commission had heard extensive and elaborate testimony on this subject in the original rate proceeding. Noting that there has been a considerable rise in stock market prices which has tended to reduce the cost of equity capital, the commission said that it hesitated to give much weight to this "spot" factor, particularly in a bull market which has displayed some notable elements of instability. The commission also alluded to the new income tax law which eliminates the penalty rate on consolidated tax returns and thus increases the value to the Bell system of a given earning rate on the part of its subsidiaries, one of which is the New York Telephone Company.

Opposition Testimony Criticized

Before weighing the evidence pertain-

ing to a rate increase, the commission considered the main body of proof submitted by the city of New York in support of its petition for a rate reduction. The city's principal witness claimed that the cost of capital to the Bell system and to the New York Telephone Company could be and should be far less than it actually was. He arrived at his conclusion as to a fair rate of return by taking an assumed debt ratio of 50 per cent as against an actual debt ratio of about 32 per cent. Then he assumed that an adequate rate of return on common stock would be about 6.25 per cent on its par value.

The commission observed, however, that there is grave danger in accepting theoretical testimony as to proper financing as against actual experience. It also questioned details as to the processes used in the theoretical calculation, pointing out the dependence on conditions of a boom market, the lack of allowance between the mathematical calculation of earnings-price ratio and the practical effects of attempting to float a large new security issue, and the lack of investigation as to the conditions behind the market which produced the witness' rather low earnings-price ratios, and which, if recognized, might invalidate all conclusions drawn therefrom.

The commission referred to one exhibit which showed that a much higher cost of money would have resulted from the use of market conditions in 1953 and 1954 instead of the very recent period on which the witness depended. It observed that the fluctuations of the stock market during the very period of these hearings indicated how quickly prices might be sent to their earlier levels with very great effect on any such mathematical computations. The witness also omitted any allowance for the elements known as market pressure and underpricing which have elsewhere been almost universally conceded to be necessary elements in the cost of financing.

The commission also criticized the fact that the witness had obviously failed to take into account the fact that the electric companies for which he ascribed a 6.25 per cent cost of equity capital had actually been earning in excess of 9 per cent on their equities. Furthermore, he was not consistent in utilizing the 6.25 per cent earnings-price ratio. Knowing that it was applicable from its very derivation to the entire equity, the witness, nevertheless, applied it only to the par value of the company's stock, disregarding the additional equity investment represented by premiums and surplus. This tended to deprive the company of a return on more than $50,000,000 of its capital invested in plant.

The witness was further subject to criticism in that he disallowed a part of the income taxes actually and unavoidably incurred by the company on the ground that they would not be incurred under his hypothetical financial structure.

He also omitted bank debt and other short-term notes from capitalization and from computations of debt ratio. The commission concluded that this was wrong, particularly in the case of New York Telephone Company, where bank loans were incurred specifically to finance construction. It said that "there is not the slightest excuse for such omission." The commission believed that these errors destroyed any probative value that the testimony might have.

The commission pointed out that in prior cases affecting the company it has never fixed an arbitrary debt ratio. It has recognized that in the incurring of debt reasonable room should be left for the exercise of managerial discretion. This has never been construed to mean, however, that a lower than system average

debt ratio for the company should be permitted to operate to the disadvantage of its customers, or that wasteful methods of financing would be condoned. Admitting that it faces difficult problems, the commission said that it welcomes all the assistance that any municipality or interested party could give it in reaching a determination. The city's testimony, however, was considered of no help. *Re New York Teleph. Co. et al. Cases 17352, 17440, December 13, 1955.*

Natural Gas Company Recovers for Distributor Gas Diverted to City Power Plant

THE United States court of appeals affirmed a judgment in favor of the Kansas-Nebraska Natural Gas Company, Inc., in two consolidated actions against the city of Hastings, Nebraska, to recover for gas supplied and to prevent the city from using, in its power plant, gas furnished under a redistribution agreement. The city operated a municipal gas distribution system as well as an electric plant and obtained gas from the company for their operation, under separate contracts providing different rates for each use. The redistribution contract contained an exclusionary clause to the effect that it would not cover gas used by the city in its power plant. It also provided for a demand charge, besides a regular commodity charge. To insure an ample margin of distributor gas, the city saw fit to subject the company to a substantial demand requirement.

Under the power-plant contract, gas was supplied on an interruptible basis. This contract the city purported to cancel under a notice provision, but continued to use purchased gas in its power plant.

The court refused to entertain the city's claim that the exclusionary clause in the redistribution agreement was void, because that question had already been adjudicated adversely to the city in a proceeding brought by it before the Federal Power Commission (98 PUR NS 1), which decision was affirmed upon appeal.

Rights As to Demand Gas

The city asserted that it had a right to use any excess of gas available under its demand contract in any manner it desired, and that it was obliged to make payment only on that basis. The company, on the other hand, insisted that the city could not use such gas in its power plant or pay for it under its distributor contract, and that any gas it consumed for that purpose must be paid for in accordance with the power-plant contract.

The court agreed with the company. It held that the city must pay for the gas diverted to its power plant on the basis of the power-plant contract rate, since the company had, subsequent to the cancellation, offered to continue to supply power-plant gas on the same terms as were provided in the canceled agreement. The city had no basis other than this offer, said the court, on which to take and use gas for its power plant.

Interruptible Service and Mutuality

The city urged that the power-plant contract was void for want of mutuality. It argued that since the supplying of gas under this agreement was on an interruptible basis, there existed no such obligation on the part of the company as could constitute consideration for a power-plant contract.

But, said the court, the mere fact that

the agreement had an interruptible basis does not make the situation one where the company could have arbitrarily refused to supply any power-plant gas, or one where its promise to supply such gas, with interruptible safeguard, would be so illusory or lacking in substance as to leave it incapable of constituting an adequate legal consideration. And, moreover, even if the agreement imposed a mere unilateral obligation, the supplying of gas under its terms and the use of the gas by the city, while the agreement was still operative, necessarily gave rise to a legal obligation on the part of the city to pay according to the terms of the instrument. *City of Hastings, Nebraska v. Kansas-Nebraska Nat. Gas Co. 226 F2d 419.*

Federal Court Refuses to Disturb Franchise Gas Rates On Contractual and Jurisdictional Grounds

THE federal district court dismissed an action brought by a natural gas transmitting and distributing company to prevent four Nebraska cities from interfering with the company's establishment of rate increases applicable to their municipal areas. At the time of this action, the company served these cities under franchise ordinances prescribing the rates to be charged. Requests had been made upon the cities to pass new ordinances authorizing the desired increases, but the requests were rejected.

The court found that even if the increases were obtained, total revenues from the company's entire operations would still not afford the 6 to 6½ per cent rate of return, which the court indicated would be fair and reasonable. It was amply shown that rate increases in these cities were necessary, if the company were to earn a fair and reasonable return.

The Contractual Question

The four cities contended that the company was estopped to assert that it was being deprived of its property without due process of law because of the rate inadequacies, on the ground that the rate provisions of each franchise ordinance, once accepted by the utility, became a contract binding on the parties for the duration of the franchise. The Nebraska law, which the court said governed this point, provides that cities shall have power to grant a franchise for a specified maximum period and shall fix the amount that may be charged for service.

The court agreed with the contention of the cities on the contractual point. "Despite the patent disparity between the power to regulate gas rates and the power to contract concerning them," said the court, "no reason would seem to exist why both functions may not reside concurrently in the same public body." Nor was any obstacle apparent that would prevent the rate regulating provisions of the several ordinances from attaining the status of a contract upon the acceptance and enjoyment of the franchise by the company.

Jurisdiction and the Johnson Act

Another issue in sharp controversy was the power of the court to enter the kind of judgment sought by the company. The court observed that in order to grant the judgment requested, it would have to suspend the operation of the several rate structures embodied in the franchise ordinances. It became apparent, therefore, that the company was simply endeavoring

to have the existing rate provisions invalidated.

In denying both the power of the court to enter the judgment sought, as well as its jurisdiction, the cities relied upon the Johnson Act, 28 USC § 1342, which denies jurisdiction to the federal district courts over orders affecting rates fixed by a state rate-making body where (1) jurisdiction depends solely on diversity of citizenship or a constitutional issue, (2) the order does not interfere with interstate commerce, (3) reasonable notice and hearing were had, and (4) a plain, speedy, and efficient remedy may be had in the state courts. The several cities, through their respective councils, were held to be rate-making bodies within the meaning of the statute.

The court ruled that the applicability of the statute depended upon the existence of all four of its specified conditions. The first one, it was noted, was plainly present, as was also the second relating to interstate commerce. The court indicated that a mere inadequacy of local rates competently prescribed for imported natural gas does not "interfere with interstate commerce," within the sense of the Johnson Act.

The third condition posed the question whether the offending ordinance rate provisions were enacted after reasonable notice and hearing. The court held that they were. On this question the company contended that because notice and hearing were not prescribed by the statute law of Nebraska but were left in this instance to the discretion of the city councils, it was immaterial whether there was any actual notice or hearing.

"What the Johnson Act requires," said the court, "is the giving of such notice and the allowance of such hearing as are adequate to meet the minimum standards of due process." Noting, moreover, that the rate provisions of the ordinances were prepared, proposed, and actively solicited by the company, the court said the company was in no position at this late date to question the validity of the notices and hearings underlying the ordinances.

That a plain, speedy, and efficient remedy was available in the state courts, as required by the fourth condition prescribed in the statute, was not seriously denied by the company. All of the conditions thus being met, the Johnson Act applied, and the court declined to exercise jurisdiction. *Kansas-Nebraska Nat. Gas Co. v. City of St. Edward et al. 134 F Supp 809.*

Expansion of Gas Pipeline Systems Found Feasible and Authorized Along with Imports and Exports

JOINTLY considering applications filed by three natural gas pipeline companies—Pacific Northwest Pipeline Corporation, El Paso Natural Gas Company, and Nevada Natural Gas Pipe Line Company—the Federal Power Commission authorized them to expand their operations and construct additional facilities for that purpose in accordance with the provisions of § 7 of the Natural Gas Act. Pacific Northwest was further authorized, under § 3 of the act, to import a substantial daily volume of gas from Canada and to export a lesser amount to that country.

The companies proposed to construct additional pipelines and compressor facilities, which were shown to be adequate and were found to be required by the public convenience and necessity. Each company's supply of gas, as well as its

prospective markets, was also shown to be satisfactory.

The commission regarded Pacific Northwest's project, including the importation and exportation of gas, as economically and financially feasible. An incremental rate of return study indicated a rate of return of 1.70 per cent for the first year, 7.80 per cent for the second, 5.70 per cent for the third, 7.80 per cent for the fourth, and 13.3 per cent for the fifth year.

The company proposed to finance the project by issuing 75 per cent of the cost in 4¼ per cent first mortgage bonds, 10 per cent in 5½ per cent interim notes, and 15 per cent in common stock. The capital structure of the company after completion of the contemplated financing was computed to be 59 per cent first mortgage bonds, 28.4 per cent bank and other notes, and 12.6 per cent common stock together with premium and surplus.

The incremental rate of return for El Paso was estimated at 5.94 per cent for the first year of operation, 6.14 per cent for the second, and 6.38 per cent for the third year. This applicant proposed to finance the new construction by bond issues, short-term bank loans, common stock issues, and the use of earnings. The capitalization of the company after such financing was calculated to be 66.9 per cent long-term debt, 10.8 per cent preferred stocks, and 22.3 per cent common equity. The commission concluded that El Paso's proposals were economically and financially feasible.

As with the other companies, the economic and financial feasibility of the Nevada Natural project was satisfactorily established. The rate of return resulting from the contemplated expansion of operations was estimated to be 6.87 per cent for the first year, 4.16 per cent for the second, and 8.91 per cent for the third year. The company showed that it could market bonds and stock sufficient to finance the expansion. After the proposed financing, the capitalization would be 52.8 per cent long-term debt, 24 per cent preferred stock, and 23.2 per cent common stock together with premium and earned surplus. *Re Pacific Northwest Pipeline Corp. et al. Opinion No. 289, Docket Nos. G-8932-G-8934 et al. November 25, 1955.*

FPC Empowered to Inquire into Reasonableness of Rates in Natural Gas Certificate Proceedings

On applications jointly heard, the Federal Power Commission granted certificates of public convenience and necessity to various independent natural gas producers and a natural gas pipeline company authorizing the transportation and sale of gas for resale and the construction of facilities necessary for that purpose, under § 7 of the Natural Gas Act.

The New York Public Service Commission and a number of distribution companies served by the applicant pipeline company advanced objections that the Federal Power Commission should require the elimination from the gas sales contracts of the producers certain escalation clauses and deny the requested certificates, unless the producers would file and prove the justness and reasonableness of their initial rates.

The commission declared that it was vested with ample power to inquire into the justness and reasonableness of the producers' rates in proceedings for certificates under § 7 of the Natural Gas Act. Because, however, of the special economic

and other conditions presented in certificate applications by independent producers, the opinion indicated, the commission has not deemed it prudent to expend the time required to resolve rate issues raised at that stage. Nor has it been practical to inquire into the reasonableness of producer rates in all producer certificate proceedings. But by a standard reservation in its orders, the commission may reserve its "unquestioned right under the act," upon its own motion or upon complaint, to inquire later into the reasonableness of such rates. This procedure affords distributing companies and consumers adequate protection against unlawful rates. The commission found, nevertheless, that the proposed price of gas to be purchased by the pipeline company from the producers would not adversely affect the economic feasibility of the pipeline's operations or the public convenience and necessity which require its service.

With respect to the objection relating to the escalation clauses, the commission observed that the mere presence of escalation clauses in contracts filed in support of certificate applications does not permit the filing company to change rates solely by reason of those clauses. Changes in rates must be made, said the commission, under the procedures provided in § 4 of the Natural Gas Act.

Commissioner Digby, taking issue with the majority of the commission in a concurring opinion, declared that a certificate of public convenience and necessity is neither required nor properly issued, under the Natural Gas Act, for construction and operation of facilities of a producer or gatherer. The action of a majority of the commission in issuing a certificate for such facilities, said the commissioner, is improper, for it represents an assertion of power denied by Congress. *Re Tamborello et al. Opinion No. 287, Docket Nos. G-3045 et al. November 28, 1955.*

Commission Lacks Authority to Order Utility to Build Within Town Limits without Local Consent

SEVERAL industrial customers of an electric company, residing within a town, petitioned the Massachusetts commission for an order compelling the company to continue serving them. The town itself operated a municipal lighting plant which furnished electricity within the municipal borders.

For many years, the company and the town had had a contract under which the company was allowed to run its wires on the town's poles. Upon expiration of the contract, the town had notified the company that thereafter the municipal plant would service the industrial customers.

The commission first ruled that it has jurisdiction to order an electric company to furnish service upon petition of a person having a place of business where the corporation is engaged in the sale of electricity, upon a showing that the party has been aggrieved by neglect or refusal of the company to supply service. In this case, however, there was no issue of neglect or refusal to serve.

But an order requiring the electric company to furnish service after its contract right to string wires on the poles of the municipal plant had expired, said the commission, would be difficult, if not impossible, to enforce. There was no statute requiring a town to permit a company to erect poles within its limits for the purpose of carrying the company's wires.

Although the commission probably had jurisdiction to compel the town to furnish service, the town was already willing and eager to do so. The commission did not have jurisdiction to compel a private utility to build within the town limits without the consent of the selectmen. The petition was dismissed. *Curtis Products, Inc. v. Worcester County Electric Co. DPU 11486, November 4, 1955.*

Commission Lacks Jurisdiction to Prohibit Utility Company from Selling Appliances

THE commission's dismissal of a proceeding brought by a mercantile association to prohibit a gas utility from engaging in the private business of selling air-conditioning equipment was affirmed by the Arkansas supreme court. The commission, agreed the court, did not have general supervision over all of the dealings of a public utility corporation, but only had supervision of public utility activities.

Just as a municipal corporation could act in either a governmental capacity or a proprietary capacity, so also a public service corporation could act in some matters of business as a public utility and in other matters of business as a private corporation.

The company's charter gave it the power to sell equipment, so it was not claimed that the company was acting outside the scope of its corporate authority. Moreover, an injunction against ultra vires acts is a matter for a court and not a point on which the commission might exercise jurisdiction.

The court made it clear that the question of whether the legislature had power to prohibit a public utility from acting in a private capacity was not the issue in this case.

The basis for the court's conclusion was that the present statutory laws did not give the commission authority to act.

The mercantile association had urged that the company was sustaining an annual loss in its private business of selling air-conditioning equipment, and that the loss was carried into the rate base for the public utility charges. Such a question, commented the court, is a matter for the commission in fixing a rate base and cannot be used to confer jurisdiction on the commission for granting an injunction against nonpublic utility business. *Associated Mechanical Contractors of Arkansas v. Arkansas Louisiana Gas Co. 283 SW2d 123.*

No Overreaching of Certificate by Bus Line

AN order of the Pennsylvania commission ruling that a bus line had exceeded its certificated authority was reversed on appeal to the superior court. It was held that the evidence did not support the order.

The bus line was authorized to originate group transportation within a specified township. Pursuant to such authority it furnished charter bus service to a group of persons which boarded the bus within the township. Many or all of the group would actually come from a point immediately outside the township and beyond the certificated authority of the bus line.

The question was, in the commission's view, whether the challenged transportation was necessarily related to the uncer-

tificated territory, so that the bus line made a "holding out" to serve the area under circumstances in which the actual place of loading was a mere subterfuge. The court ruled that there was no evidence presented from which any improper "holding out" might be inferred. The fact, said the court, that the place of loading was immediately adjacent to the uncertificated point from which the passengers came does not constitute a violation of the bus-line's authority.

The commission urged that the termination of the group movement not at the place of origin within the certificated territory but at the place from which the passengers actually came revealed the true intent of the bus line to violate its certificate.

Again evidence was lacking. Noting that the bus-line's certificate did not impose any restriction as to such termination point, the court observed that since the appellant originated the challenged transportation within its certificated area, it was permissible for it to discharge the passengers at any return point convenient to them. *Schuster d/b/a Schuster's Bus Lines v. Pennsylvania Pub. Utility Commission, 117 A2d 828.*

Merger of Telephone Companies Approved as Aid to Expansion and Administration

THE North Carolina commission approved the joint application of two telephone companies requesting authority to merge. They operated in contiguous territories, and one of the companies owned nearly all of the voting stock of the other.

It was shown that the proposed merger would facilitate the financing of an improvement and expansion program of the applicants. The commission found that the merger would also improve their administration and result in a stronger operating utility.

The companies proposed an exchange of stock whereby the survivor would offer new common on the basis of par value and new preferred, having the same par value and dividend requirement as the old stock, share for share. This exchange proposal, being considered sound, was approved.

An original cost and related reserve study had been completed with respect to the properties of the surviving company, but the books of the other company reflected no such property valuation. Its plant account balances and the related depreciation reserves were consequently required to be maintained until an original cost and related reserve study could be made and approved by the commission.

Despite some variances in the rates of the two companies, the existing rates of the expiring company were ordered to be continued in effect pending the outcome of the commission's determination as to a proper level of rates. *Re Concord Teleph. Co. et al. Docket P-16, Sub 20, December 14, 1955.*

Accounting Prescribed for Accelerated Depreciation

THE Ohio commission prescribed the accounting procedure to be adopted by an electric company electing to adopt one of the methods of accelerated depre-

ciation authorized by the 1954 federal income tax law. The three specific methods of determining depreciation for federal tax purposes are: straight line, declining balance, and sum of the years-digits methods, as well as other consistent methods producing results similar to the declining balance method.

The Internal Revenue Code permits the taxpayer to adopt one of these several methods with respect to facilities constructed, reconstructed, or acquired and initially used after December 31, 1953. The adoption of a method of accelerated depreciation will result in reducing in the early years of the life of the property certain amounts of federal income taxes with respect to the property affected. The amount and extent of such net difference in taxes will depend upon the nature and the volume of the facilities from time to time added to the taxpayer's plant, as well as the election of the taxpayer as to whether certain of these facilities shall be subject to accelerated depreciation.

The commission said that if the company elects to adopt one of the methods of accelerated depreciation, it should be required to account appropriately for and to use the funds resulting from the reduction of taxes, and the funds should not be available for the payment of dividends.

The commission provided that the company should account for that portion of its properties which are the subject of accelerated depreciation in the same manner as its other properties, and to accrue depreciation therefor at rates consistent with its rates for like property not subject to such depreciation.

During the service life of any of the company's properties with respect to which it has elected accelerated depreciation, and in any year in which a net difference of federal taxes on income results therefrom, the company should charge to "Provision for Special Reserve" and credit to a "Special Reserve" amounts in total for each year equal to such net difference in taxes. The commission reserved, however, for further determination the particular other liability account, if any, to which such "Special Reserve" should be transferred. *Re Cleveland Electric Illum. Co. No. 25,731, September 13, 1955.*

Rival Gas Certificate Applicant Wins Court Approval On Showing of Feasible Proposal

THE Idaho supreme court reversed the decision of the state commission denying the certificate application of Intermountain Gas Company and granting that of Idaho Natural Gas Company, a rival applicant. The companies sought authority to establish a natural gas distribution system in certain counties in the state.

Intermountain expended considerable sums of money in preparing to qualify for certification by the commission. The company employed experts, canvassed prospective customers, and prepared complete plans for its proposed system. It presented a statement of its organization, officers, directors, and stockholders, as well as a financial statement. Idaho Natural made no offer of such statements, presenting only a relatively cursory study of its proposed system.

Systems Proposed

Intermountain produced plans for an investment during the construction period of approximately $8,000,000, and for the

laying of distribution lines in the central areas of each community in the area it proposed to serve. The plans contemplated a balanced load of industrial, commercial, and residential customers, with provision made for later extensions as demand might require and as gas might become available. The proposal was accommodated to the limited supply of gas available and was undisputedly feasible, financially and economically, within the known gas supply.

Idaho Natural's proposal contemplated a capital investment during the construction period of about $16,000,000 and the laying of approximately twice the footage of distribution lines that the other company proposed. Idaho Natural intended to pipe all of the built-up areas in each community, though no canvass had been made to determine whether there would be customers available on the piped streets, on the disputed assumption that the system could be constructed more economically by building it all at once.

The court observed that Idaho Natural's plan anticipated future costs, which is not a proper basis for rate making. Public utilities, said the court, are not permitted to include anticipatory capital expenditures in their rate base. Only property actually placed in the public service can be included.

Thus, in establishing a rate base for this company, the state commission would be confronted with the problem of separating that part of its plant actually in service from that part not in use, during the years required to develop the business to such a point that all of the initial installation would be put in operation. But such development, the court noted, presupposes an unlimited supply of gas which was not indicated by the evidence in this case.

Since Idaho Natural relied upon a supply of natural gas far in excess of the amount presently available, said the court, it becomes apparent that its plan is unsound and unworkable when related to the existing gas supply. The court asserted that the commission could not speculate on the future availability of gas, nor join the applicant in such speculation, but must confine its determinations to facts susceptible of demonstration. For otherwise it would commit itself in advance to allow unused installation to be included in the rate base and to authorize excessive rates in order to provide a return on such investment.

Divergent Rate Proposals

The rate proposals of the two companies were marked by considerable differences, the rates of Intermountain being generally substantially lower than those of Idaho Natural. The court said it was apparent that Intermountain's proposals would result in a larger consumption by commercial and industrial consumers, both firm and interruptible, in proportion to the domestic consumption of firm gas, while Idaho Natural's plan emphasized consumption and would result in a disproportionate volume of available supply devoted to that use. Uncontradicted expert testimony indicated, however, that a well-balanced system requires a market for a large volume of commercial and industrial gas in order to make it financially sound and to enable it to supply gas for domestic consumption at a reasonable rate. On cross-examination, Idaho Natural admitted, in effect, that its rate proposals were not financially sound.

In these circumstances, said the court, the commission did not regularly pursue its authority in approving Idaho Natural's application. It should have granted Intermountain's application and issued to that company the requested certificate. The

cause was consequently remanded to the commission for further proceedings consistent with the court's opinion. *Re Intermountain Gas Co. et al. 289 P2d 933.*

Gas Service Extensions Denied for Lack of Supporting Evidence

THE Massachusetts commission dismissed without prejudice an application by the Boston Gas Company for authority to extend service in several towns near Boston. The application was filed under a statute providing that the commission may authorize a gas company to extend service to towns other than those named in its charter.

Being compelled in the near future to lay new feeder mains in the territory, the company desired to engineer them so as to accommodate several additional towns. No estimates of cost or concrete plans for rendering service were presented in support of the application, though, on the other hand, no opposition was offered at the hearing by any other distributing company.

The commission was nevertheless of the opinion that the statute under which the authority was requested intended that the commission pass upon the justification of the extensions "from a system economic standpoint." The commission should consider, it was said, whether the proposed extensions will place an inordinate burden on other customers or whether the new service may be expected to be self-supporting.

Indicating that it had no objection to the proposed service and would hasten to approve it on a proper record, the commission expressed the belief that it was entitled to know the extent of the contemplated construction, when it would be undertaken, how much it would cost, and what were the anticipated financial results. *Re Boston Gas Co. DPU 11540, 11541, December 21, 1955.*

Restricted Permit for Gas Project Granted and Rates Approved Subject to Renegotiation

THE North Dakota commission authorized a gas company to construct and operate a transmission pipeline and distribution system between certain communities within the state. The commission was satisfied that adequate storage facilities were available, and it assured, by the order, that a maximum number of communities in the state would be served with native natural gas.

It was felt that to grant a certificate without reservation or condition would constitute a breach of trust on the part of the commission. To permit the company to transport 90 per cent of native natural gas of the highest value out of the state, commented the commission, would justify a legislative investigation into the competency and standards of conduct of the commission.

The commission's order directed extensions into other communities which the commission felt could adequately be served by the company.

Franchises granted by a number of cities and villages were held to be invalid in that they did not conform with state laws which required a reservation of a percentage of native gas for use in the exercise of the franchise rights. Any

transporting, selling, or distribution of gas by the company within the confines of the communities which had granted the invalid franchises, said the commission, would be unlawful until the franchises were amended to conform with the law, or new franchises in conformity with the law were enacted.

Proposed consumer rates were approved subject to renegotiation of the wholesale price paid by the company for dump gas, and the furnishing of a bond to insure indemnification of ratepayers in the event such rates were found excessive at the end of a specified period of time. The commission had found that the wholesale contract price was higher than a maximum it had set and clearly out of accord with the regional and national average prices, thus affecting consumer rates which were based upon the wholesale price set forth in the contract. *Re Montana-Dakota Utilities Co. Case Nos. 5351, 5353, November 25, 1955.*

Transit Company Token Rate Increase Granted after Depreciation and Working Capital Adjustments

THE Savannah Transit Company was authorized by the Georgia commission to increase its token rate from four for 35 cents to five for 45 cents. No change in other fares was requested. In proving additional revenue requirements, the company cited higher operating expenses resulting from new wage and pension agreements.

Two major items in the proposed rate base were adjusted for the purposes of this proceeding. The company applied a 16 per cent rate of depreciation on its buses during the first five years and one-half the remaining balance each year thereafter. It made a practice of selling its buses at the end of five years and crediting to surplus any excess of the selling price over the net book value. The commission said this method resulted in excessive depreciation expense during the first five years of use of the equipment. Estimating the reasonable life of a bus at eight years, the commission applied a straight-line depreciation rate of 12½ per cent per annum, which it considered adequate.

The company claimed a substantial amount in its rate base for cash working capital. Since tax accruals appeared sufficient to provide for this requirement, it was disallowed entirely.

In determining the reasonableness of the token rate increase, the commission used the actual revenues and expenses for the preceding twelve months, adjusted to account for the additional revenue to be derived from the rate increase, together with proper expense adjustments. The resulting estimate assumed, however, that any decline in traffic would be offset by an increase in the average fare resulting from a shift of passengers from the use of tokens to the payment of cash fares as a consequence of the higher token price. On the basis of this calculation, the commission computed the prospective rate of return for the company at 7.9 per cent. This figure was not thought to be excessive, considering the downward trend in traffic which would reduce the rate of return with the passing of time. *Re Savannah Transit Co. File No. 19444, Docket No. 885-U, November 7, 1955.*

Other Recent Rulings

Discriminatory Telephone Rates Increased. In authorizing rate increases applicable to a group of rural telephone subscribers, who objected that they had been promised that the lower rates of a predecessor company would be maintained as to them, the Wisconsin commission asserted that the application of rates lower than those duly filed to some subscribers within a given rate classification is, in the absence of justifying facts, unjustly preferential and unreasonably discriminatory. *Re Amery Teleph. Co. 2-U-4466, December 19, 1955.*

Carrier Exceeding Authority Enjoined. The Arizona supreme court, in sustaining a lower court decision which enjoined a transit company from operating beyond its certificated rights, observed that to the extent a carrier exceeds the bounds of its authority, it operates, in effect, without a certificate and may be enjoined from performing such excess service. *Tucson Rapid Transit Co. v. Old Pueblo Transit Co. 289 P2d 406.*

Franchise Cost as Element of Fair Value. The Illinois commission regarded the cost of a water company franchise less the related reserve, as a part of the original cost of the company's plant, and to that extent such cost constituted one of the elements of original cost in determining the fair value rate base. *Re East St. Louis & I. Water Co. No. 42194, October 19, 1955.*

Approval of New Franchises. New franchises granted an electric company by municipalities do not require commission approval or certification if the company already has a valid certificate of public convenience and necessity to serve the territory, held the Missouri commission, since a certificate of unlimited duration supported by proper municipal authority is good, absent revocation, as long as the municipality permits the operation by franchise, sufferance, or otherwise. *Re St. Joseph Light & P. Co. Case No. 13,154, October 25, 1955.*

Federal Aid. The Missouri commission held that a statute providing that not more than half the cost of a grade separation construction should be apportioned to the state highway commission was not applicable where funds obtained from federal sources were to be used to pay the cost, and that the statute did not bar the commission from approving a contract between the railroad and the highway commission under which the highway commission was to bear the entire cost. *Missouri Highway Commission v. St. Louis-S. F. R. Co. Case No. 13,163, October 3, 1955.*

Certificate Amendment. A transferee of a motor carrier certificate authorizing service in a base area was denied authority by the Colorado commission to establish a branch office in a city outside such area where this would have destroyed the original intent of the certificate and enabled the transferee to compete with common carriers without proof of public convenience and necessity or proof that existing carriers were not furnishing adequate service. *Re Boulder Truck Service, Inc. Application No. 13161, Decision No. 44676, October 4, 1955.*

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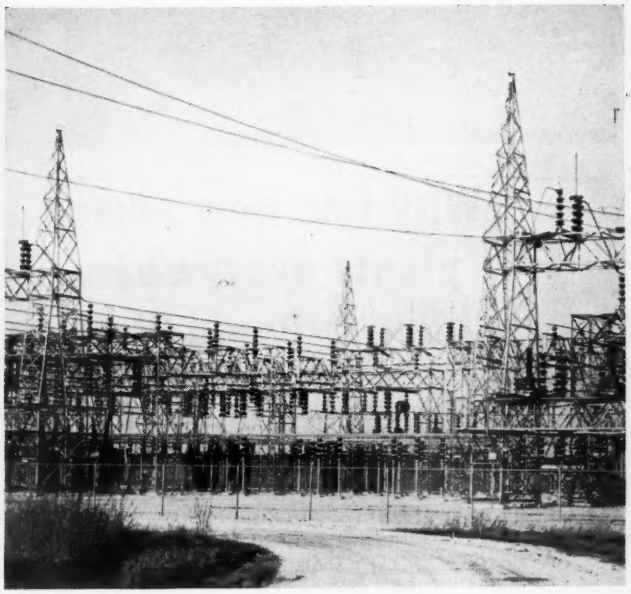

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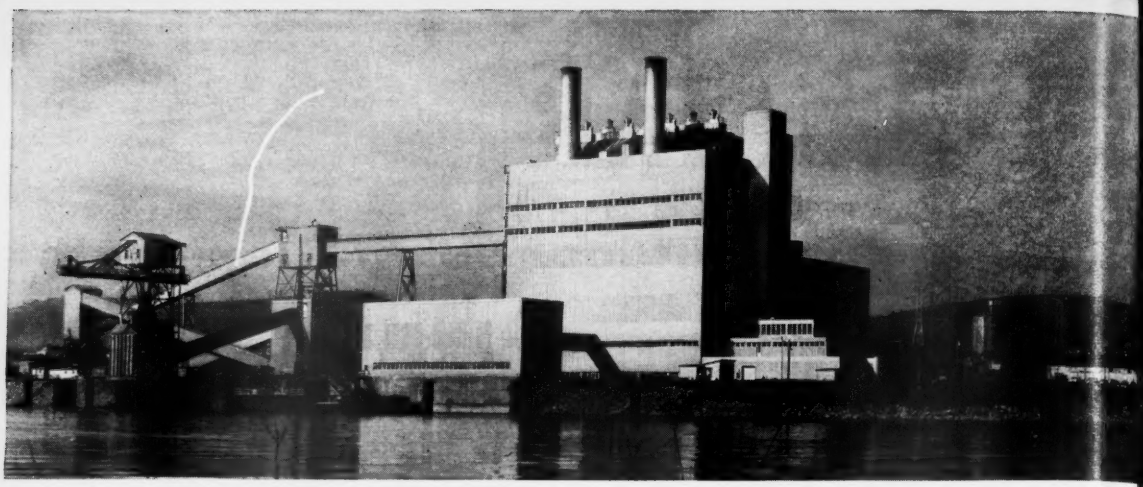

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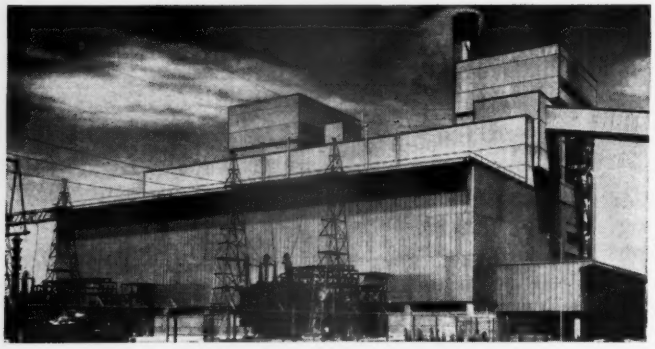

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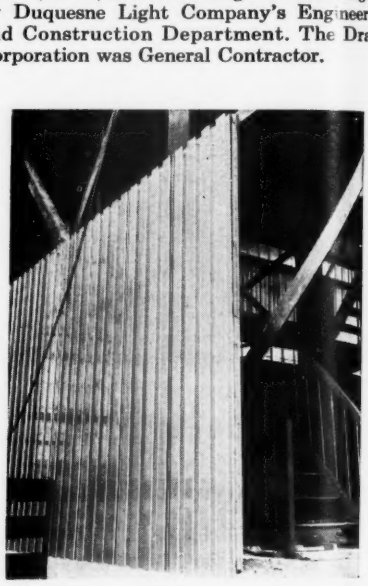

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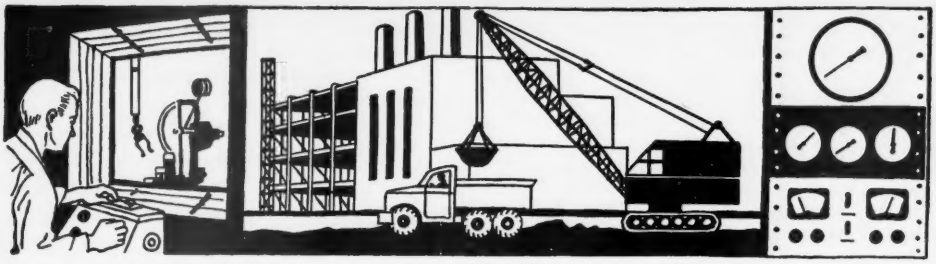

Industrial Progress

CP&L Plans to Add Big New Generator

CAROLINA Power & Light Company will spend $40,500,000 for new construction in the next two years and plans to add a new generator by mid-1958.

The two-year construction budget was approved by the board of directors at its quarterly session recently. The program includes completion of a 180,000 horsepower generating unit near Moncure by mid-summer. By comparison, the 1958 unit will have a capability of 225,000 horsepower.

Louis V. Sutton, president of Carolina Power & Light, said the turbine-generator for the 1958 unit already had been ordered from Westinghouse, and that the boiler had been ordered from Combustion Engineering. The site for the new unit has not been finally determined, Mr. Sutton said, but it may be at the Moncure location.

The new unit will boost CP&L's generating capability to approximately 1¾ million horsepower, or more than four times its capability of ten years ago. The new generator is the latest in a plan of postwar expansion which commenced as soon after World War II as strategic materials became available.

During the past ten years, CP&L has spent $164,000,000 for new construction, Mr. Sutton said, and expects to spend approximately $65,000,000 during the next three years. The company's 1956 budget for new construction totals approximately $20,300,000.

Public Service Electric and Gas To Spend $100,000,000 in 1956

EXPENDITURES for electric and gas additions and improvements in 1956 by Public Service Electric and Gas Company will probably exceed $100,000,000, setting a new all-time high for the company, Lyle McDonald, chairman of the board, announced recently. More than $380,000,000 has been spent by Public Service Electric and Gas Company in the last five years for new construction.

Two major electric generating stations are under construction, marking the first time in the company's history that two such projects are under way simultaneously. Engineering work and the general development of the site have already started for the new Bergen generating station in the borough of Ridgefield, Bergen County. Work is progressing on the new generating station at Linden, which started early in 1955.

When these two stations, costing, between them, upwards of $229,000,000, are completed and added to the Public Service interconnected electric system, it is estimated that the company's total electric generating capacity in December, 1958, will be about 3,000,000 kilowatts. This will represent a 44 per cent increase in capacity over 1955.

Baltimore Gas Plans 5-Year, $211 Million Expansion

BALTIMORE Gas & Electric Co. announced plans to spend more than $211,000,000 for additional facilities during the next five years. About $40,000,000 will be spent in 1956.

The expenditures for the five-year period will include: $166,800,000 for the expansion of the company's electric system, $36,975,000 for the gas system and about $8 million for miscellaneous facilities.

During the past five years, the company added more than 82,600 electric customers and more than 53,600 gas customers. Total electric sales over the period rose 39 per cent, while gas sales for the past five years have increased about 118 per cent.

$89,000,000 Program Planned By Consumers Power

An $89,000,000 construction and improvement program for 1956 was announced recently by Dan E. Karn, president of Consumers Power Company.

Electric expansion will require approximately $62,000,000, with $17,000,000 for gas facilities, and $10,000,000 for buildings and other service property additions.

"This will bring the total expenditure since 1945 to $580,000,000," Mr. Karn said, "and is the largest one-year program in the company's history. In that period the company's annual operating revenues have increased from $61-million to more than $186-million for the 12 months ended November 1955, or a growth of 203%.

"The record 1956 figure is made necessary by the growing use of electricity and gas in the company's 64-county Michigan service area, with a present aggregate of more than 1,200,000 customers. This total has increased by 435,000 since 1945."

Major power generating additions will raise the Consumers statewide system capacity to more than 2,000,000 kilowatts.

Industry Picks Carolina Sites

INDUSTRY last year picked sites within Carolina Power & Light Company's service area for 35 new plants and 64 expansions, according to a report released by D. E. Stewart of the power company's industrial development department.

When completed, this new industry is expected to create 12,710 new jobs, to release $27,308,500 per year in new payroll and total $64,130,000 in capital investment.

(Continued on page 26)

Mr. Stewart's report included one big military project—the Air Force's $22,600,000 reactivation of Seymour-Johnson Field at Goldsboro. It is expected to release $11,000,000 per year in new payroll to 300 civilians and 6,000 military personnel.

New non-military plants will account for $12,585,000 in investments, create 2,474 new jobs and release $5,935,500 per year in new payroll. Investment of $18,945,000 by existing industry for non-military expansions will create 3,936 new jobs and $10,373,000 a year in new payroll, according to Stewart's report.

The list covered projects ranging from a $10,000 metal-working shop to the $5,800,000 expansion of Riegel Carolina Corporation at Acme and a multi-million dollar addition by Sonoco Products at Hartsville, S. C.

International Harvester Catalog

HEAVY-DUTY utility tractor power applied to earth and materials handling is described in a new folder illustrating many commercial and industrial applications of the new International 300 Utility tractor. More than a score of special-duty equipment items readily attached to the tractor are shown. Copies may be obtained from International Harvester Company, 180 North Michigan avenue, Chicago 1, Ill.

So. Cal. Edison Plans $60,000,000 Plant

SOUTHERN California Edison Company is negotiating to acquire approximately eighty acres of property in the Huntington Beach area of Orange County as a site for a steam-electric generating station, according to an announcement by James F. Davenport, vice president and general manager. With the first two 200,000 kilowatt generating units, the plant will represent an investment in excess of $60,000,000.

"The record industrial, commercial and domestic growth of Southern and Central California during recent years has created an ever increasing demand for more electricity," Mr. Davenport said. Last year alone there were more than 85,000 new meters added to the Edison system lines. This is comparable to supplying the electrical needs of the cities of Burbank and Pasadena.

Atomic Energy Commission Invites Industrial Participation In Many Lines

GREATER familiarity with the names Zirconium, Hafnium, Beryllium, and Thorium, among others, will be the natural by-product of extending the industrial frontier into a preserve that has recently been sealed by government. Names that once were only headaches in a college chemistry class will mean big business to many companies.

The Atomic Energy Commission has a contract with the Carborundum Metals Company, Inc. of Akron, New York for delivery of 200,000 pounds of zirconium and 4,000 pounds of hafnium per year. The commission needs more. AEC, as the agency is popularly known, has plans to solicit proposals for delivery of 2 million pounds of zirconium metal over a 5-year period, or 1,200,000 pounds over a 3-year period. Proposals would in-

(*Continued on page* 28)

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If you, or your dispatcher, have ever called a work crew and received no answer because compressors, ditchers and other noises drowned out the radio's message, or because all men were working too far from the truck to hear the call—you need Motorola's **"Big Voice"**.

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INDUSTRIAL PROGRESS
(Continued)

clude delivery of as much hafnium metal as can be produced from the zirconium ores processed.

In addition to the metal to be purchased by the federal commission, quantities of zirconium and hafnium will be required for *privately-financed nuclear power projects.* This requirement will not be filled from the AEC's quota or stockpile.

AEC announced earlier that it intends to expand the scope of private industry participation in the uranium industry. AEC is entertaining proposals for production of refined uranium salts in privately-owned and operated milling facilities. The processes which will go over to the private owner-operator includes mining, milling, refining of concentrates, conversion of uranium salt to uranium fluoride and metal and fabrication of the uranium metal into suitable shapes. Private activity in this area was only recently limited to mining and milling of raw uranium ores. The time to submit proposals for production in privately-owned and operated mills of the refined uranium compounds has been extended by the AEC until October 1, 1956.

Hartford Electric Light to Build 100,000 KW Unit

PLANS for a large addition to The Hartford Electric Light Company's steam power plant below Middletown were announced recently. It will be the largest electric generating unit in the company's history.

President Kenneth P. Applegate stated that the company's directors had approved a generating unit of about 100,000 kilowatts capacity to be installed as the first addition to the company's most recent station, erected in 1954. The present Middletown station has a capacity of about 72,000 KW.

Studies and plans for the project are now under way, and it is expected that construction work will commence in the spring of 1957.

Reactor Grade Beryllium Metal Sought from Private Industry

THE Atomic Energy Commission is currently asking private industry to submit proposals to supply reactor grade beryllium metal. These requirements have been met in the past by production from a government-owned plant at Luckey, Ohio, operated for the AEC by the Brush Beryllium Company. During January the AEC

(Continued on page 30)

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invites proposals for the supply of up to 100,000 pounds annually over a 5-year period. If acceptable proposals are received from private industry, the Luckey plant will be placed in a stand-by status. Deliveries from the private producer are required at the earliest practicable date which will permit the supplier to attain the necessary production level, allow for orderly and economical design, construction and plant shake-down periods. A three-month period will be allowed in which to prepare proposals for submission to the commission.

Penn Transformer Wins AEC Contract

PENNSYLVANIA Transformer Company, Canonsburg, Pa., has been awarded a contract for furnishing a 7,500 KVA transformer for the National Reactor Testing Station, the Idaho Operations Office, U. S. Atomic Energy Commission, announced. Pennsylvania Transformer's offer of $72,293 and 100-day delivery time was determined to be the most advantageous of six bids opened by the Idaho Operations Office December 14.

Apparent low bidder had been Legnano Electric Corporation, New York, with an offer of $68,965. However, the time specified for manufacture in Milan, Italy, and delivery—360 days—was not acceptable. The Government's invitation specified that delivery time would be an essential factor in the award of the contract.

Other bidders were Westinghouse Electric Corp., $71,868, delivery date indefinite; Moloney Electric Co., St. Louis, Mo., $82,208.80 including a 10% escalation clause and 180-day delivery; General Electric Co., Schenectady, N. Y., $83,823.30, including a 10-per cent escalation clause and with 140-day delivery; and Allis-Chalmers, Salt Lake City, $85,306.75, including a 10-per cent escalation clause and with 140-day delivery.

The contract covers furnishing an outdoor type transformer, impulse tests and services of an erection engineer.

Babcock and Wilcox Awarded First Lump Sum Fuel Element Contract

BABCOCK and Wilcox Company of New York was awarded the first lump sum contract for the fabrication of reactor fuel elements in a privately-owned facility. The company will fabricate 325 fuel assemblies for the AEC's Materials Testing Reactor at a unit cost of $279.28 or a total of $90,766. The contract for this work is between the Babcock and Wilcox Company and the Phillips Petroleum Company which operates the Materials Testing Reactor for the AEC at the National Reactor Testing Station in Idaho. Chairman Strauss of the AEC observed that this award was a significant step in the development of a civilian atomic energy industry and that the private suppliers' entry into this field would make the facilities at Oak Ridge National Laboratory previously used for this purpose available for other work.

Price for Thorium Metal Set At $43 per Kilogram

THE AEC has announced recently that a revised basic price of $43.00 per kilogram for thorium metal has been established. This price will apply to licensees who plan to use thorium metal in nuclear reactors and for other enterprises for peacetime applications of atomic energy. The AEC designated the Fernald Feed Materials Production Center as the f.o.b. point.

AEC Program Encourages Private Chemical Processing Plants

EARLY this year the AEC announced a program to encourage private industry to build and operate plants for the chemical processing of irradiated fuel elements from research and power reactors. This is another in the several recent steps AEC has taken toward private ownership of the atomic energy facilities for peaceful uses. These chemical processing plants constitute an important part of the fuel cycle of nuclear reactors. They perform the operations of recovery of fissile and fertile materials present in the irradiated fuel elements for re-use, and of placing the radioactive fission products in usable forms. To date these operations are being performed only at AEC (government-owned) sites.

Industry Invited to Try Recovery Of Uranium from Fluoride Scrap

FLUORIDE scrap generated at plants producing feed materials for use as reactor fuels can be processed for recovery of uranium. The AEC has invited industry to participate in this recovery and notes the additional opportunity that such a program would also produce sizable quantities of fluorine for commercial use. It estimated that 4,000 to 8,000 tons scrap material will be available f processing annually.

Gulf States Utilities to Build 111,000 Kw Unit

GULF states Utilities Company ha authorized Stone & Webster Eng neering Corporation to proceed wi the design and construction of an e tension to their Neches power stati located in Beaumont, Texas. The i stallation, to be designated unit no. will have a net capability of 111,0 kw. The generating equipment will installed out of doors, following t type of construction used on other r cent extensions of the Neches statio

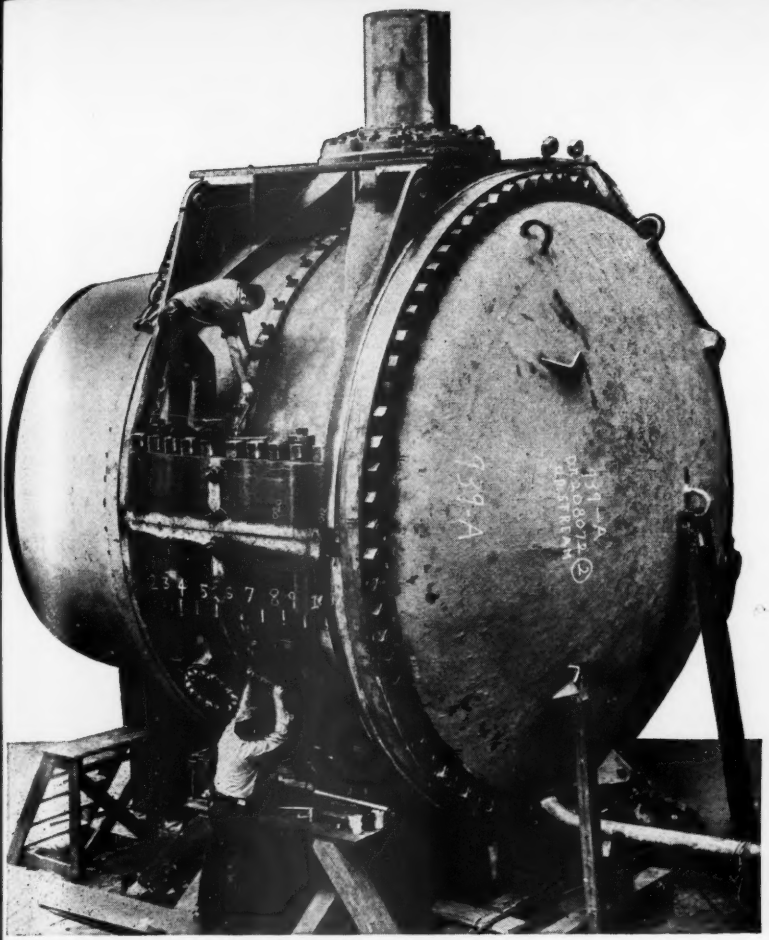
The preferred standard reheat tu bine generator will operate und steam conditions of 1,450 psi gag 1000/1000 F.

Holan Bulletin Describes Series 7000 C Bodies

J. H. HOLAN Corporation, 41 West 150th street, Cleveland 10, Oh has just published a four-page d scriptive bulletin on its new Seri 7000 C Construction Bodies wi Crew Compartments.

The bulletin includes: body dime sions, standard and optional occasio and an explanation of the Holan D sign Selection Plan which enables bu ers to order bodies to best suit th budgets and their needs.

Series 7000 C Bodies are availab at all four Holan plants: Clevelan Holan Thrift Line Corporation, Gri fin, Ga.; the Phoenix Division, Pho nix, Arizona; and Brantford-Hol Limited, Brantford, Ontario.



This 16-Foot Butterfly Valve Illustrates the type of work which Newport News takes in stride. Newport News built 3 such valves, each weighing 446,000 lbs., for the Ross Power Plant, Skagit Project, Department of Light, City of Seattle, Washington. Designed for a water flow of 3,620 cu. ft. per sec., and a hydrostatic pressure of 290 psi., these valves were shop tested by Newport News at 450 psi. They are hydraulically operated with oil at 1,500 psi. pressure. Shop tests assure speedy, trouble-free assembly of Newport News built equipment, on the site.

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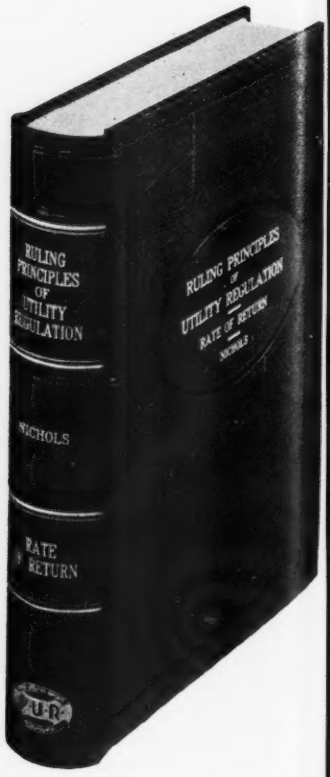

Throughout the work, emphasis is placed on the ***ruling principles of courts and commissions*** concerning the ***various factors*** to be ***considered,*** the ***weight*** to ***be accorded such factors,*** and ***illustrations*** of the ***application*** of the ***principles discussed.***

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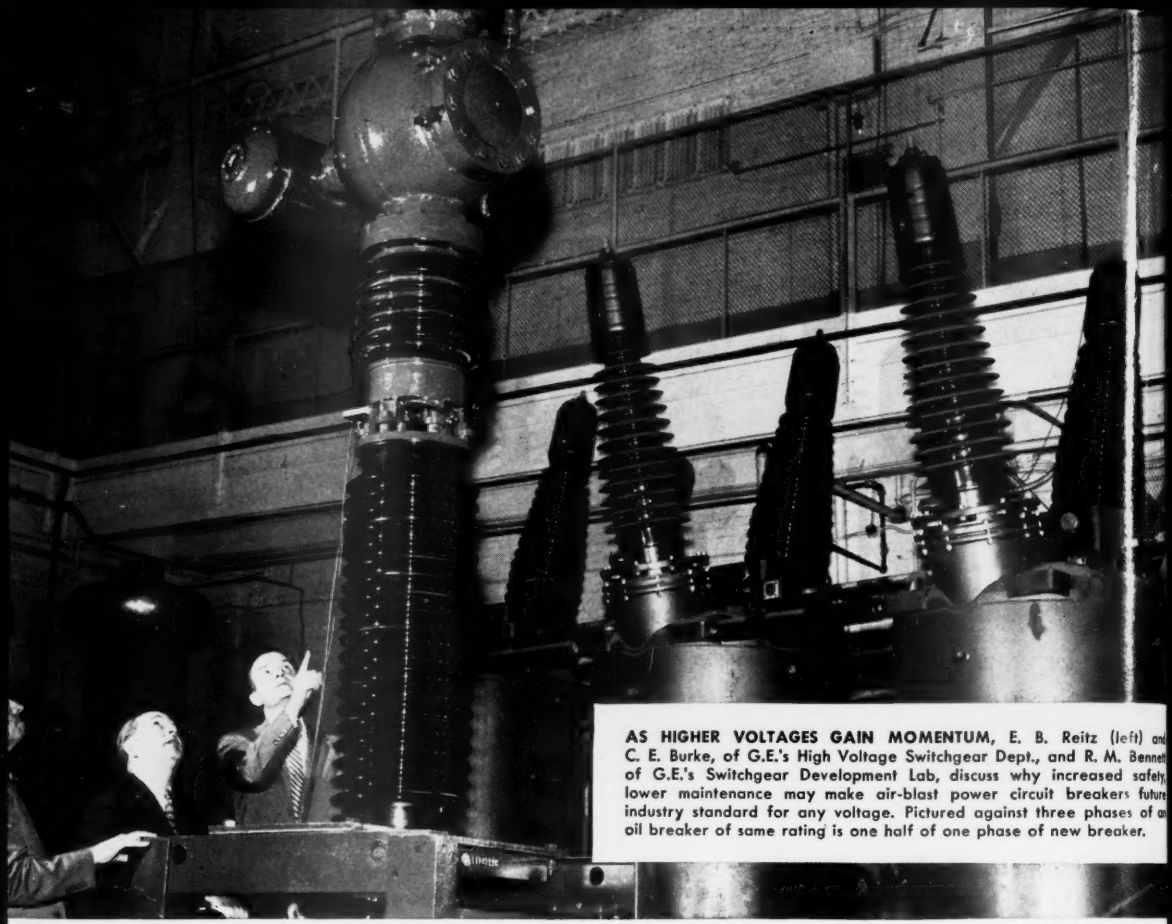

AS HIGHER VOLTAGES GAIN MOMENTUM, E. B. Reitz (left) and C. E. Burke, of G.E.'s High Voltage Switchgear Dept., and R. M. Bennett of G.E.'s Switchgear Development Lab, discuss why increased safety, lower maintenance may make air-blast power circuit breakers future industry standard for any voltage. Pictured against three phases of an oil breaker of same rating is one half of one phase of new breaker.

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